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ABSTRACT

These charts present an overview of the current economic health of American agriculture. The charts move from the national and international arenas to farm economic health measures and crop and livestock trends. A small amount of descriptive narrative accompanies most of the charts. Charts depicting the economic picture of U.S. agriculture include national and international economies, agricultural trade, farm economy, crop production, and meat and livestock production. The majority of the charts are background charts for U.S. agriculture. They focus on farm population, farmworkers, income, food and fiber system, agriculture and the general economy, assets and finance, inputs, costs and returns, land use, land values, irrigation, timber products, conservation, farmer cooperatives, population, income, poverty, employment, banking, federal funds, economic indicators, consumer prices, food marketing costs, food consumption, diet, family economics, food assistance, child nutrition and food distribution, producer subsidy equivalents, U.S. trade, world production, world trade, livestock, dairy, poultry, rice and other grains, wheat, coarse grains, soybeans, fibers, vegetables, fruit, tropical products, sugar, tobacco, and transportation. An index is provided. (YLB)

1988 Agricultural Chartbook

United States Department of Agriculture
Agriculture Handbook No. 673

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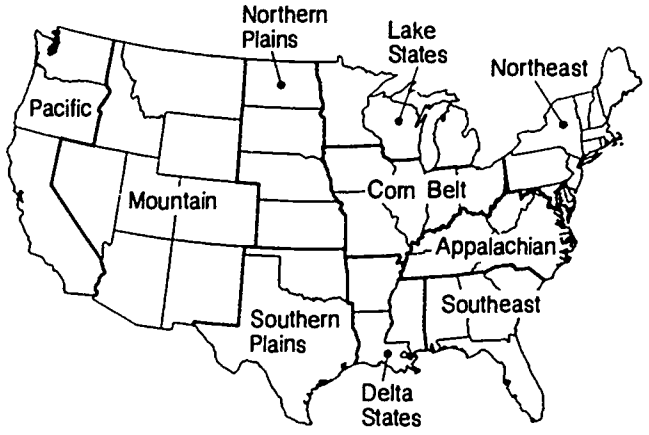
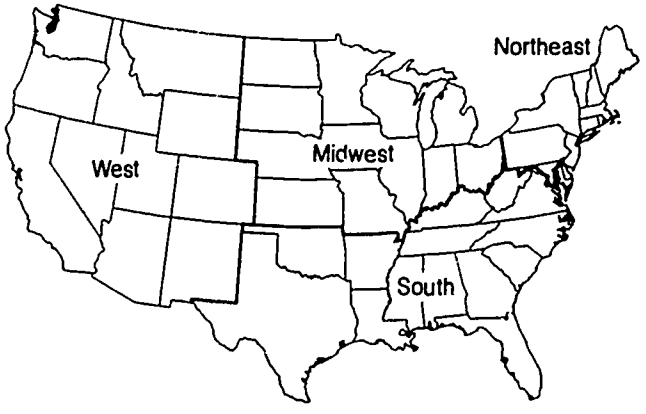
Farm Production Regions



Census Regions



Economic Picture of U.S. Agriculture

After several years of slumping exports, accumulating crop surpluses, and deepening financial stress, the situation for American agriculture appears to be improving. World demand for farm products is strengthening, while the growth in production in competitor countries has slowed. Consequently, total U.S. farm exports are rising in both volume and value. The agricultural trade surplus exceeded $1 billion in December and for fiscal 1988 is expected to total $12 billion, more than double the level of just 2 years ago.

The improvement in exports is having a positive influence. Crop surpluses are falling, prices are rising, farm income is record high, and farmers are solidifying their financial position by paying off debt.

The upturn in the farm economy may be traced to several factors. Global macroeconomic conditions, particularly the decline in the value of the dollar, have restored the opportunity for U.S. trade growth. Lower loan rates under the 1985 Farm Bill have enabled U.S. farmers to sell at competitive prices, while simultaneously removing incentives for foreign acreage expansion. The Export Enhancement Program and other trade assistance programs have helped regain markets that would otherwise be lost to competitors who heavily subsidize exports.

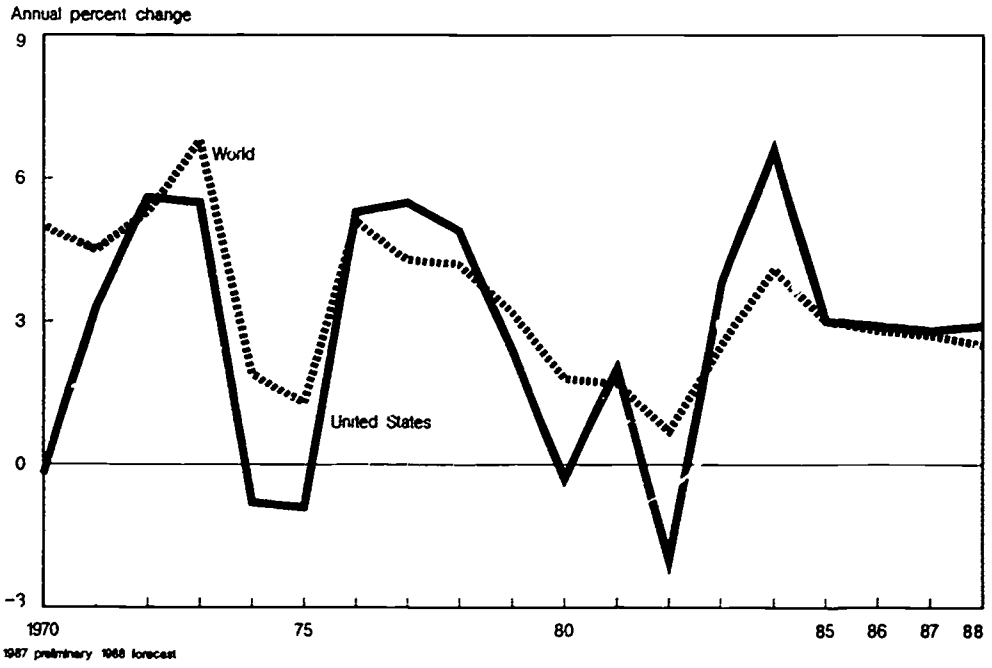
—From a statement by the Assistant Secretary of Agriculture for Economics, March 3, 1988

The following charts, based on the Assistant Secretary's statement, present an overview of the current economic health of American agriculture. The charts move from the national and international arenas to farm economic health measures and crop and livestock trends.

National and International Economies

Only small gains in domestic GNP growth are expected during the first half of 1988 due to accumulated inventories and decreased consumer spending. The first half outlook also includes moderate domestic inflation and stable or slightly lower interest rates.

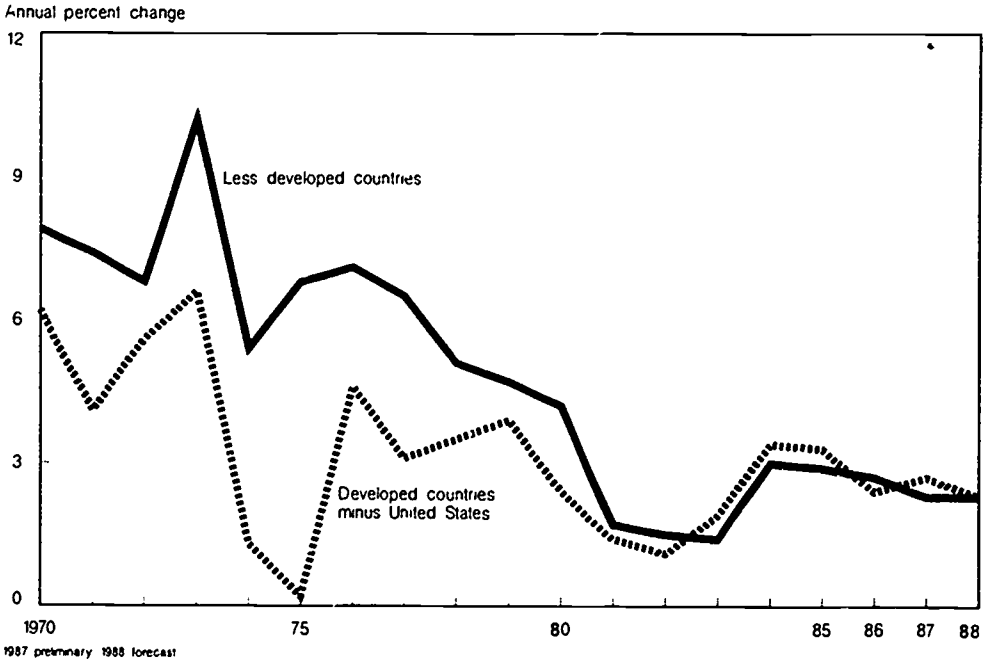
World and U.S. Economic Growth



The U.S. economy should expand slowly in 1988, led by increased exports and investment.

Slowing U.S. purchases of foreign goods and services is likely to result in somewhat slower real growth overseas, despite the Japanese and West German efforts to stimulate their economies.

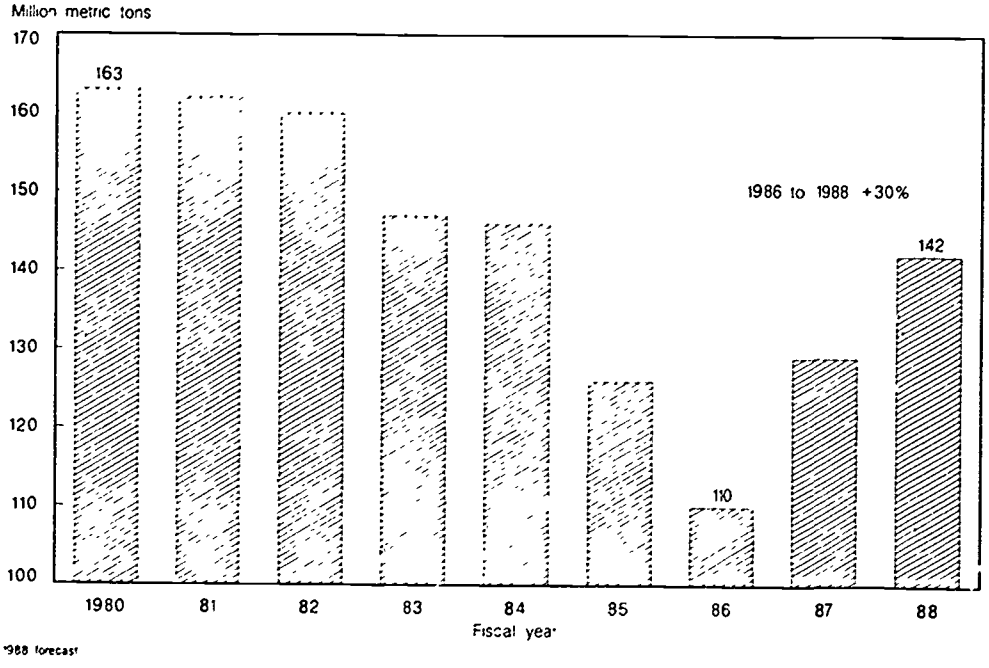
Economic Growth .broad



Agricultural Trade

U.S. agricultural export volume in FY 1988 is expected to rise 10 percent to 142 million tons. Value of U.S. farm exports could rise 16 percent in fiscal 1988 to more than $32 billion. The turnaround is mostly attributed to the more competitive loan rates of the Food Security Act of 1985, a decline in the U.S. dollar, improved world economic growth, and increased export assistance.

U.S. Agricultural Exports



U.S. agricultural exports fell over 50 million tons between FY 1980 and FY 1986 and will likely be up more than 30 million tons in 1988 from the 1986 low.

With little change in farm imports expected in 1988, the U.S. agricultural trade surplus could rise by nearly $5 billion in 1988 to $12 billion.

U.S. Agricultural Trade[1]

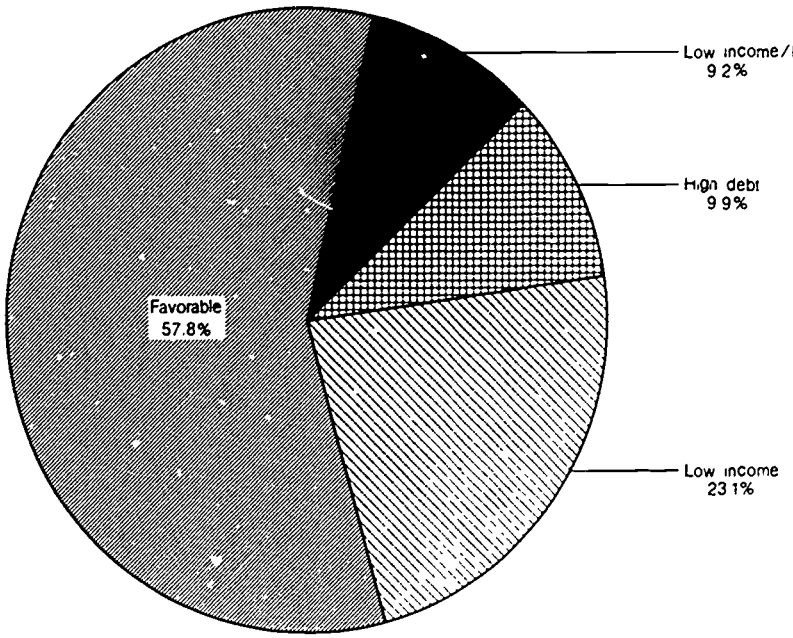
Item	1970	1975	1980	1985	1986	1987P	1988F
				Billion dollars			
Exports	7 0	21.8	40.5	31 2	26.3	27.9	32.5
Imports	5 7	9.4	17.3	19.7	20.9	20.6	20.5
Trade balance	1.3	12 4	23.2	11 5	5.4	7.3	12.0
				Million metric tons			
Exports	61 8	93.5	163 9	125 8	109.5	129 2	142.5

P = preliminary F = forecast. [1]Fiscal years

Farm Economy

The financial outlook for farmers is improving. Farm income has rebounded in recent years. Although Government payments continue to be an important element of cash income, their role is expected to diminish. Just over 9.2 percent of all farms and 13 percent of commercial farms still have high debts and low income that make meeting financial obligations difficult. Production expenses and farm assets per farm are both expected to increase in 1988, while farm debt outstanding falls.

Financial Status of U.S. Farm Businesses

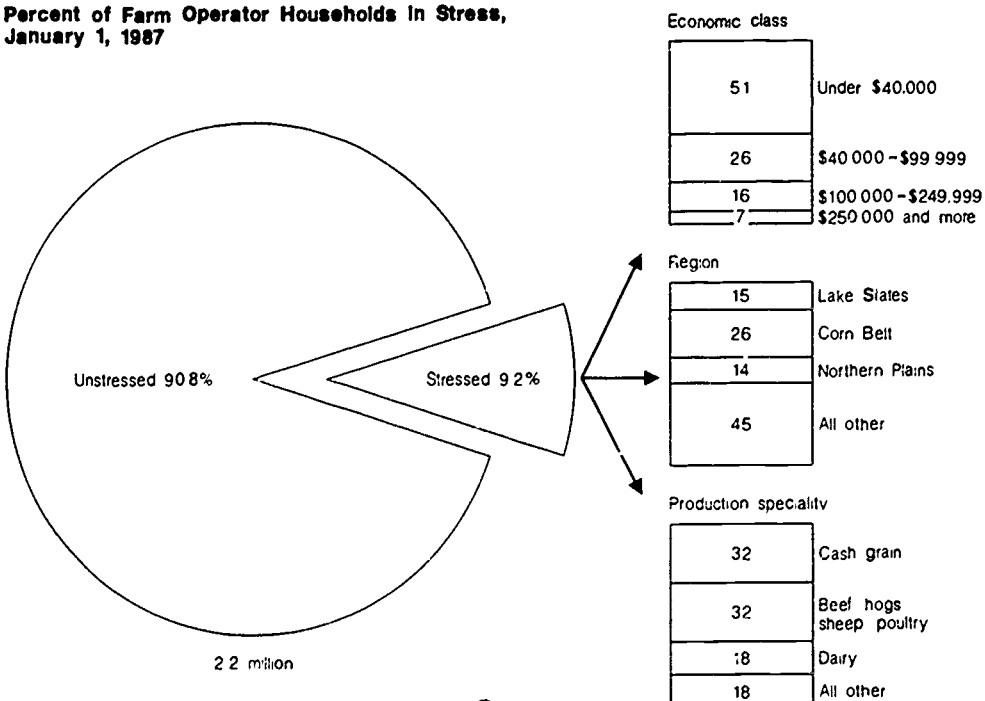


As of January 1 1987

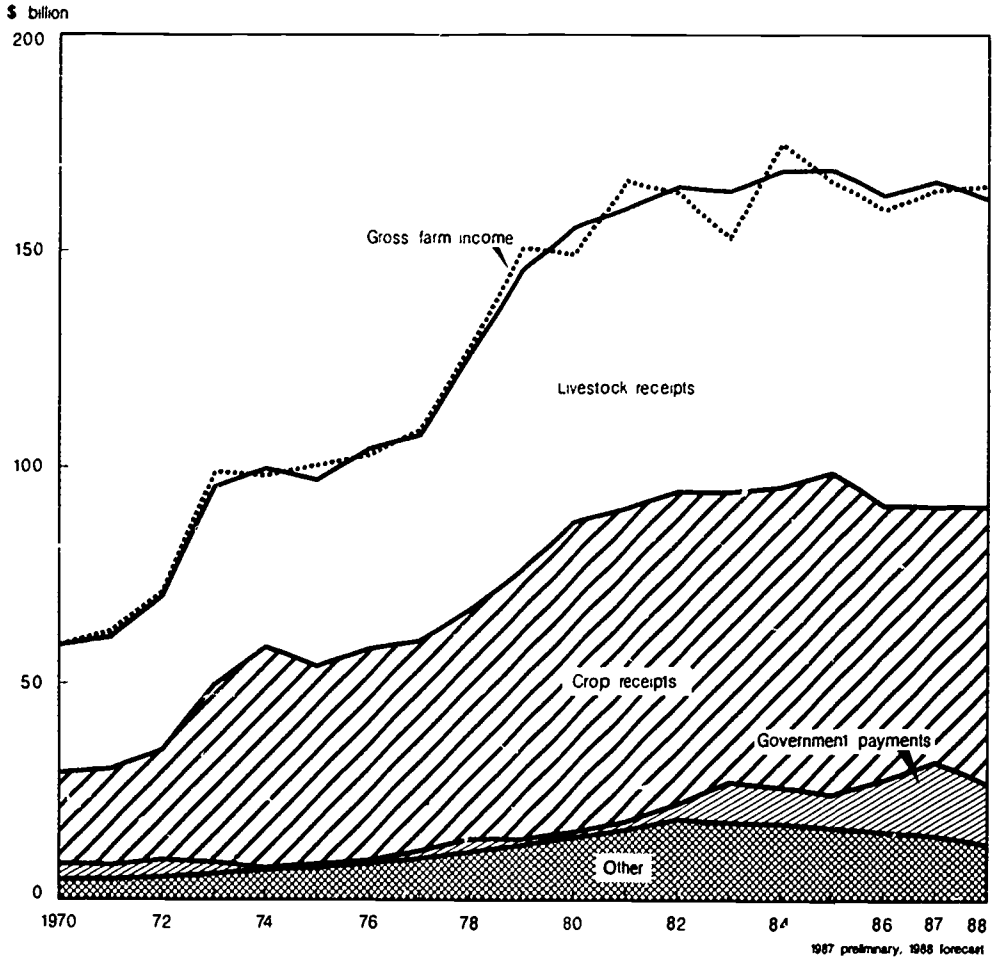
Not all farms were faring well in January 1987. Just over 9.2 percent of farm operator households reported a combination of low income and high debt.

9.2 percent of farm operator households were also financially stressed. Cash grain farms and those with farm incomes under $40,000 were hit particularly hard.

Percent of Farm Operator Households in Stress, January 1, 1987



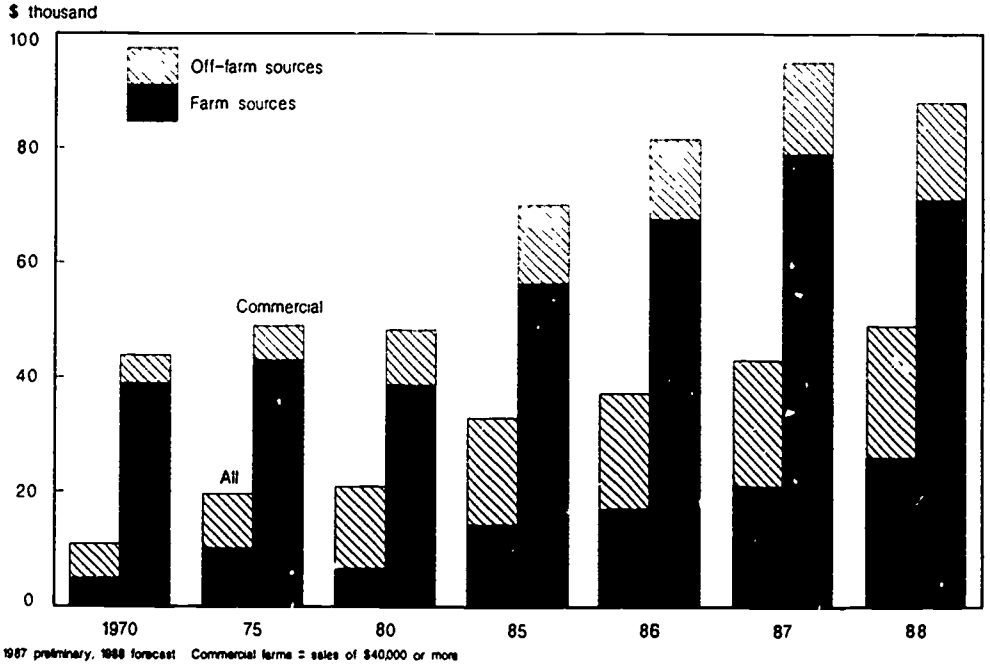
Gross Farm Income Components



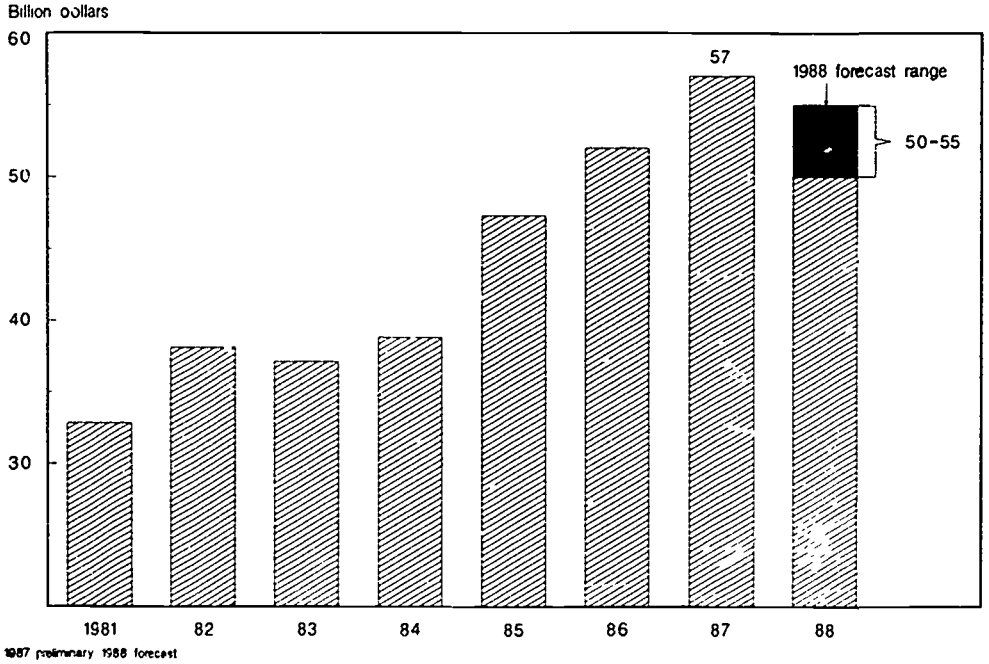
The 1988 farm economy picture is improving. 1988 gross farm income should remain near 1987's level.

1988 income per farm will continue to rise, but is expected to edge down for commercial farms. Off-farm income should account for a larger share of total income.

Income per Farm



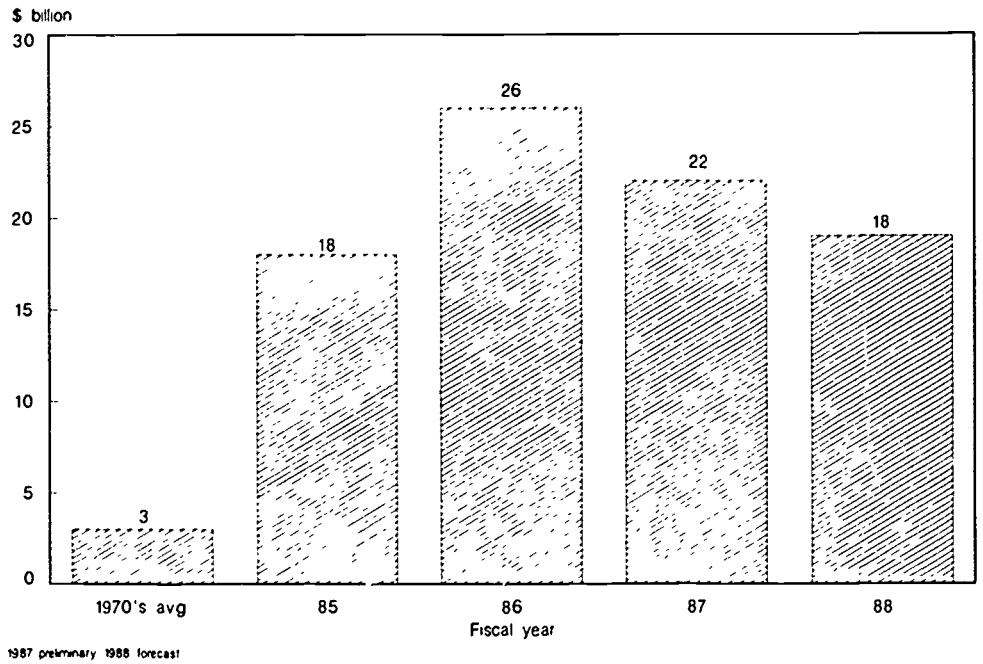
Net Cash Farm Income



Net cash income, a record $57 billion in 1987, is expected to range from $50-55 billion in 1988.

Net government outlays for farm programs (including direct cash payments and lending), down in 1988 for the second straight year, are one reason for the slight decline in net cash income

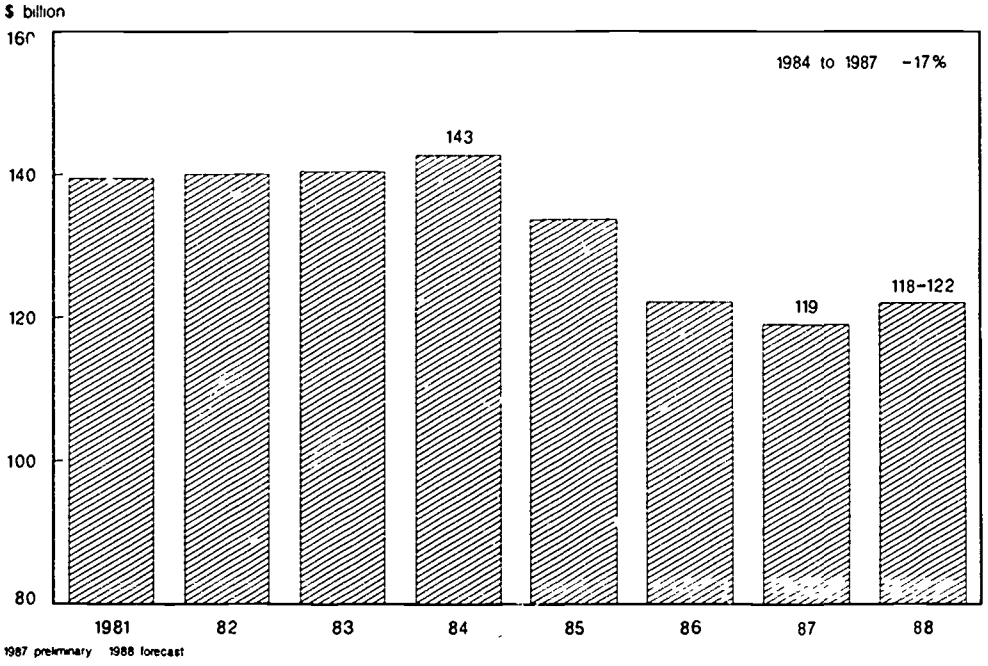
Farm Program Outlays



Production expenses will likely end a 3-year decline in 1988.

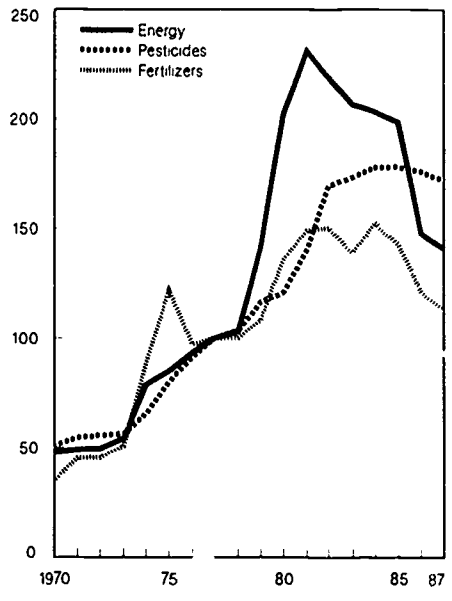
Feed and fertilizer will likely register the largest price increases among all production expenses. Short-term interest rates may also average slightly higher this year.

Farm Production Costs



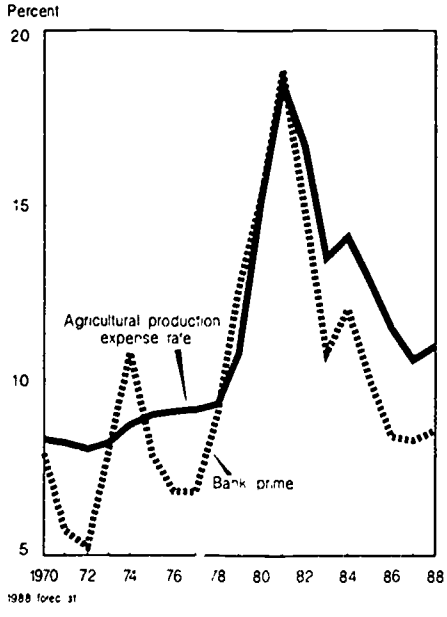
Farm Input Prices

Price Indices
1977 = 100

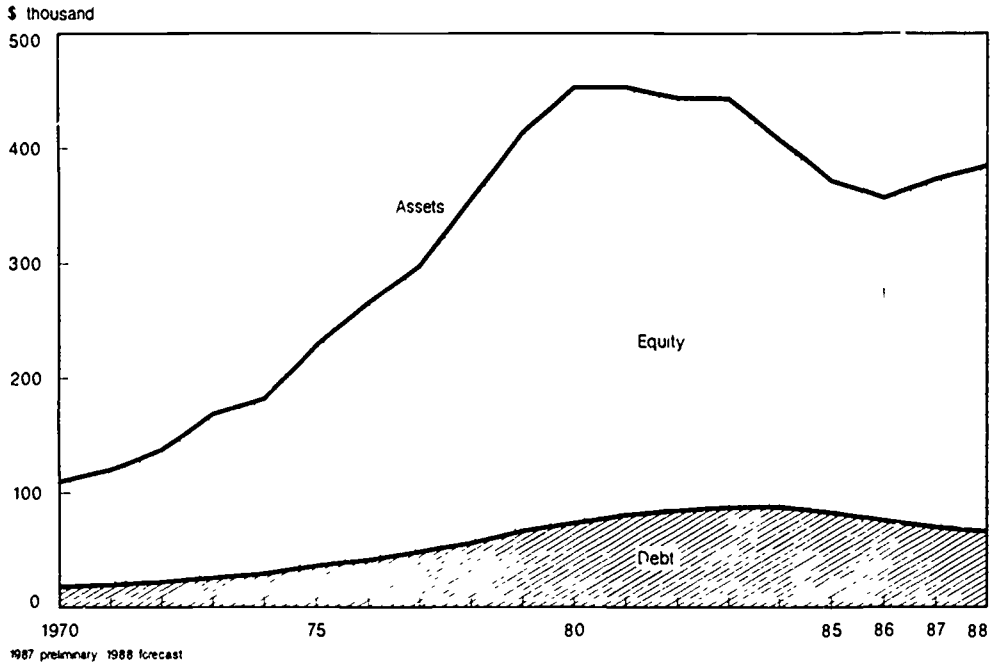


Interest Rates

Short Term
Percent



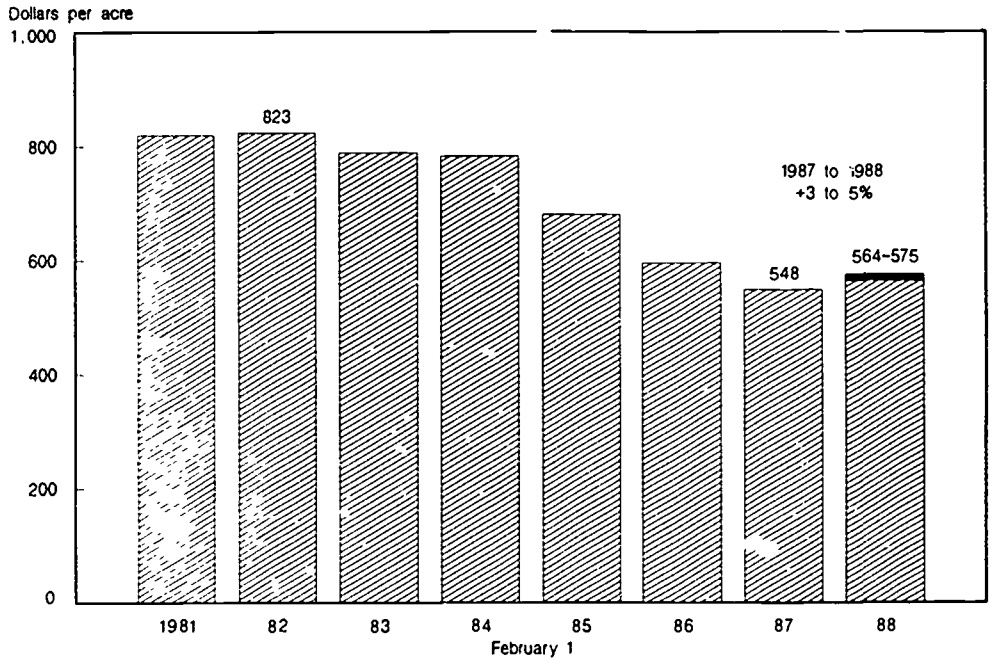
Assets, Debt, and Equity per Farm



Farm assets per farm (up in 1987 for the first time since 1981) will continue to increase, led by higher real estate values.

Farm real estate values are on the rebound. Values will likely rise about 3 to 5 percent from 1987, or to $564-$575 per acre.

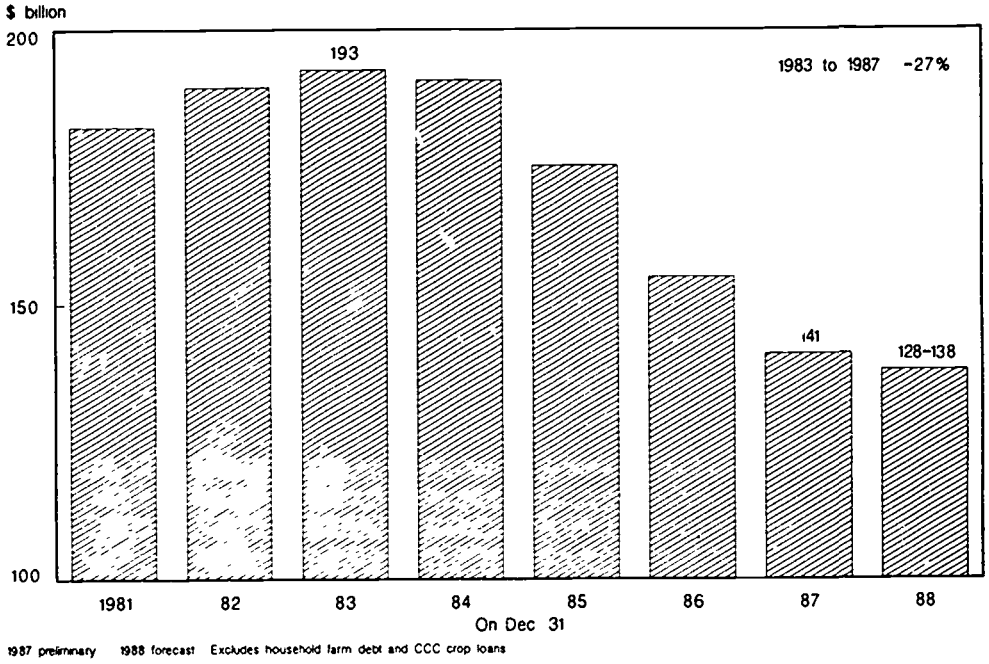
U.S. Farm Real Estate Values



Farmers are expected to decrease their debt burden in 1988, with debt reduction amounting to $60 billion since 1984. Total farm debt outstanding should fall for the sixth straight year.

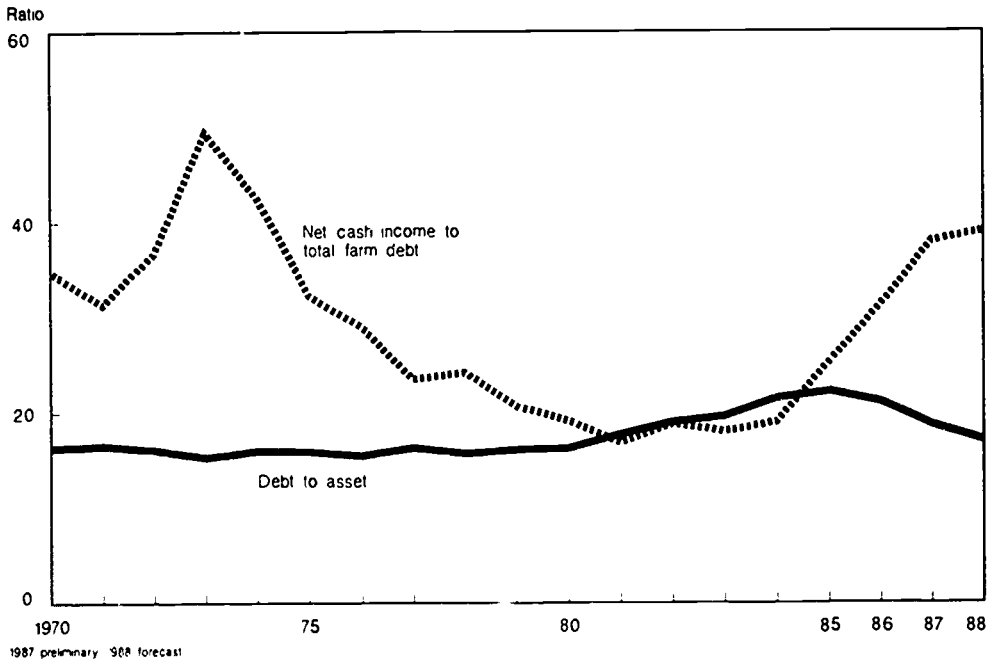
Increased assets and lower debts will lead to an improved debt-to-asset ratio (debt as a percentage of assets). The net cash income-to-debt ratio (cash income less cash expenses as a percentage of debt) should increase. The turnaround in these ratios reflects the general rebound in incomes and assets, and a lessening in the debt burden.

Farm Debt



1987 preliminary 1988 forecast Excludes household farm debt and CCC crop loans

Selected Financial Ratios

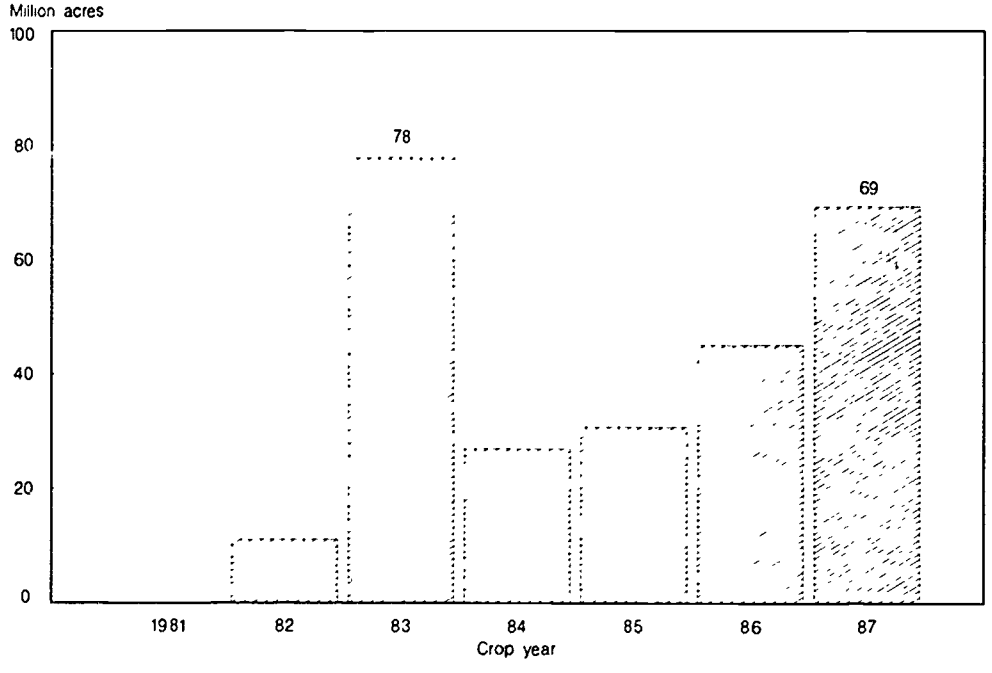


1987 preliminary 1988 forecast

Crop Production

Global crop output will likely fall an estimated 4 percent in 1987/88 as reduced grain crops offset greater world production of oilseeds and cotton. The 5-percent drop in 1987/88 world grain production reflects smaller U.S. feed grain acreage, reduced wheat area and yields abroad, and lower U.S. and foreign rice production.

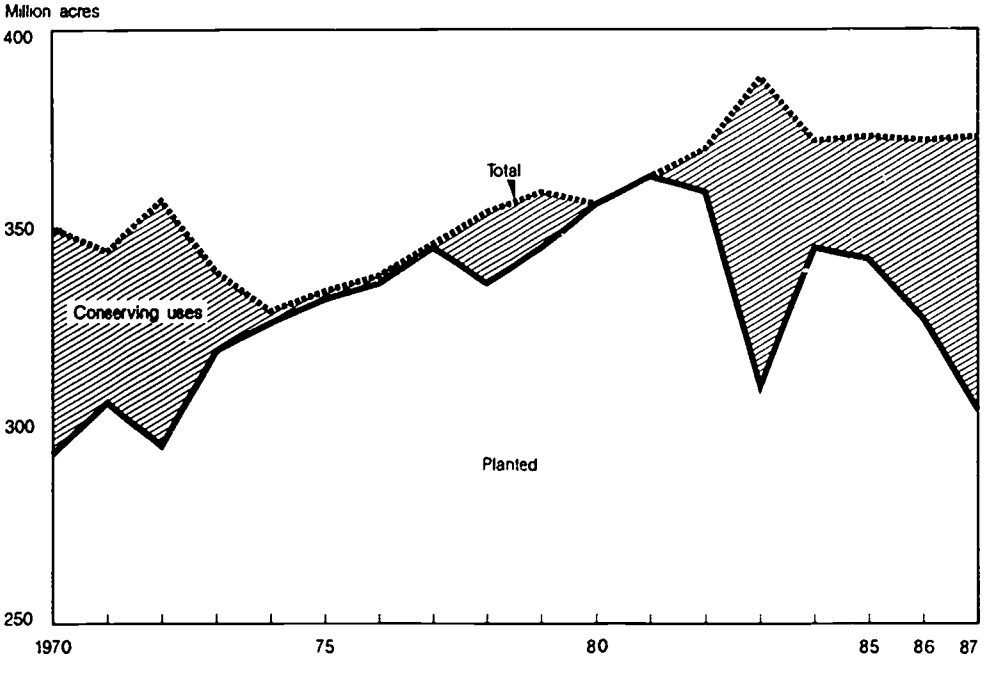
Acreage Idled Under Federal Programs



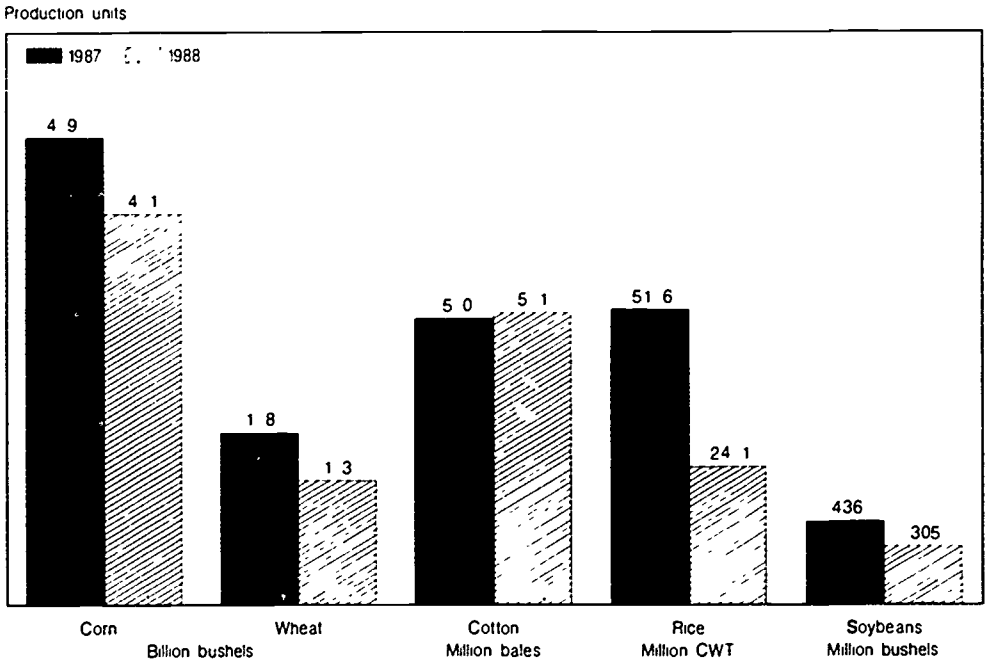
U.S. acreage idled under Federal programs in 1987 totaled more than 69 million acres, second only to the record 78 million acres idled in 1983.

U.S. acreage planted to principal crops totaled 304.5 million in 1987, down 2 percent from 1986 and 11 percent below 1985.

U.S. Crop Acreage Planted and Placed in Conserving Uses



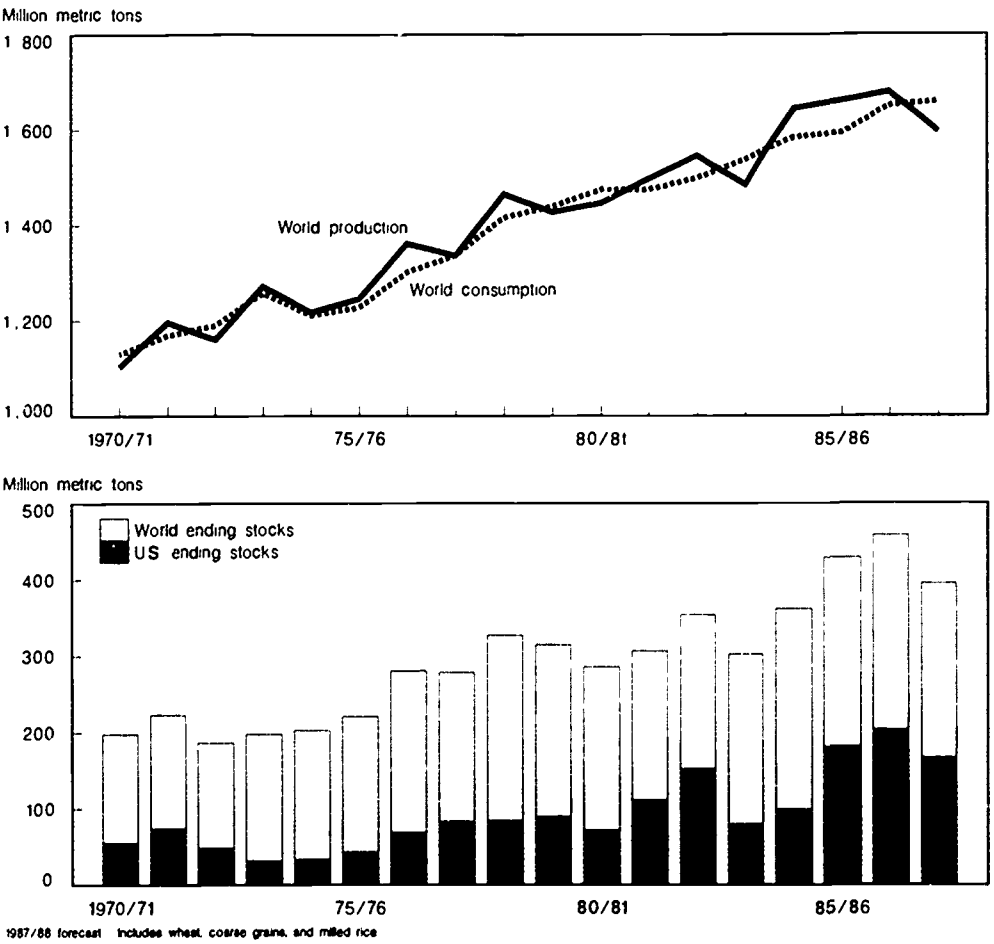
Crop Stockpiles, 1988 vs. 1987



U.S. stocks of most major field crops will fall in 1988. Stocks of feed grains, however, will still be large by historical standards.

World grain production will fall 5 percent in 1987/88, the first decline since 1983/84. U.S. output fell 12 percent and foreign output, more than 3 percent. U.S. and world ending stocks will decline.

World Grain Production, Consumption, and Ending Stocks

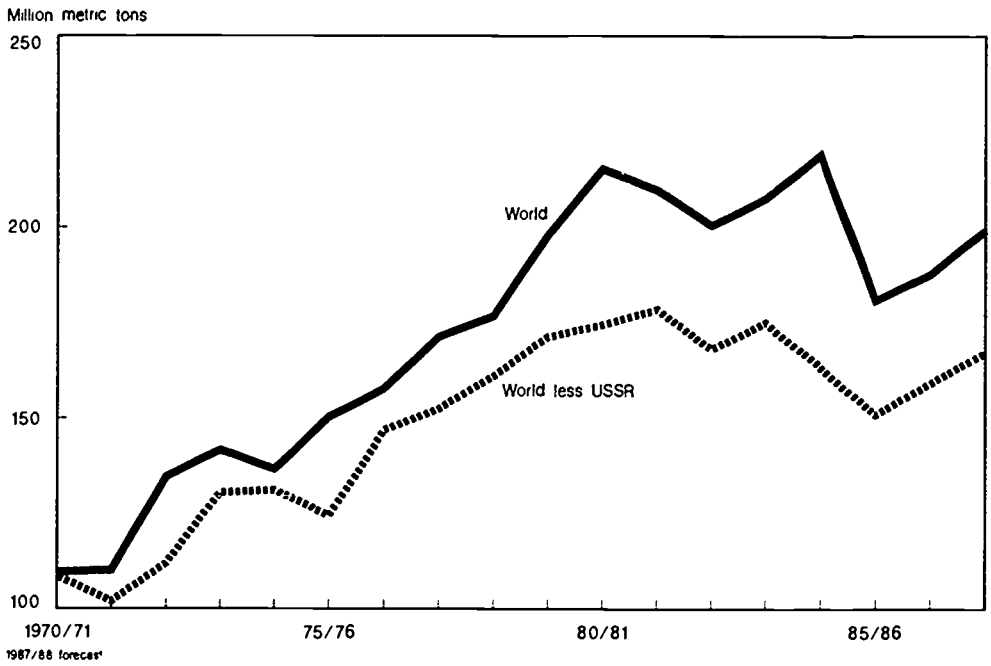


1987/88 forecast Includes wheat, coarse grains, and milled rice

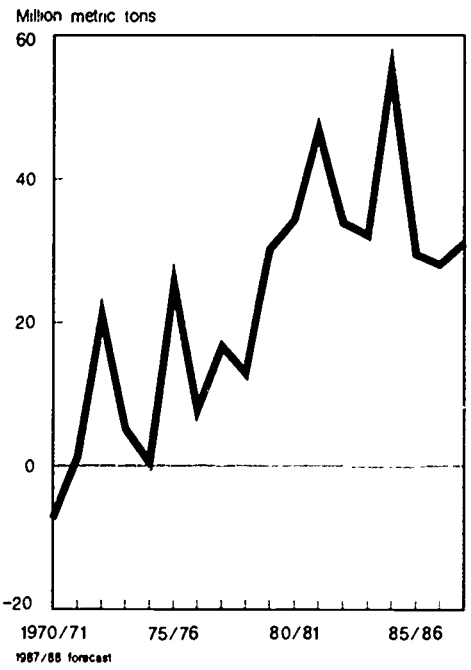
World grain trade is forecast 6 percent higher in 1987/88, with the USSR accounting for 30 percent of the gain.

Although the USSR's grain crop is the largest since 1978, their imports are up 12 percent.

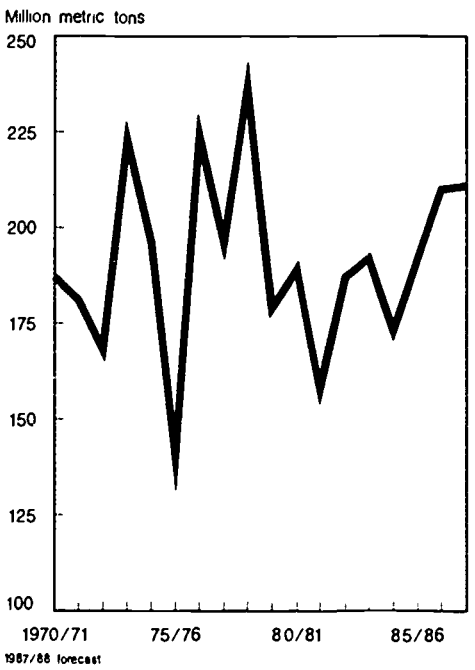
World Grain Imports



USSR Net Grain Imports



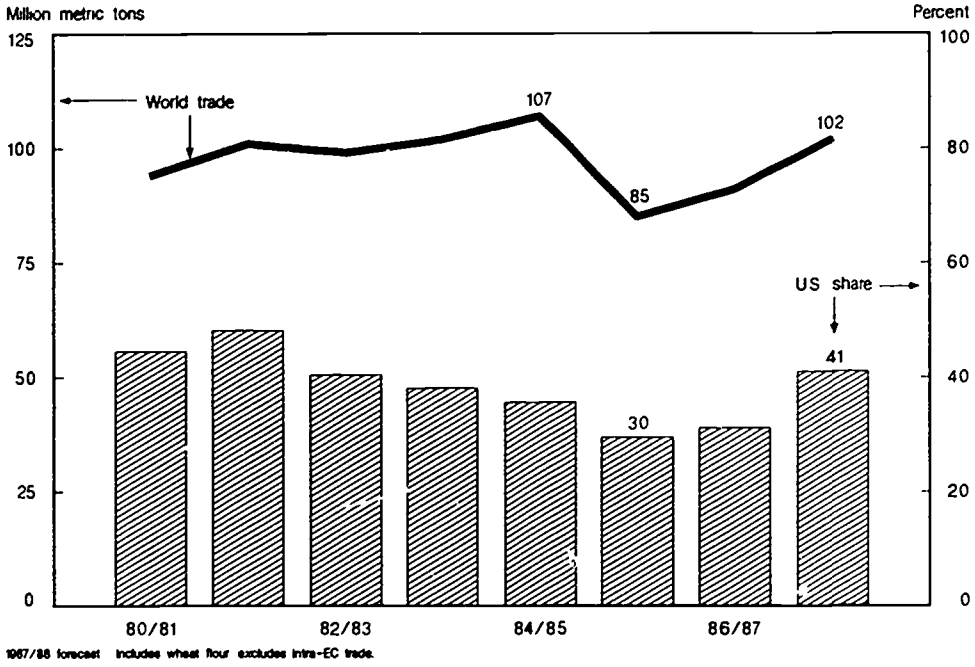
USSR Total Grain Production



U.S. share of world wheat trade is forecast at 41 percent in 1987/88, up from 31 percent the previous year.

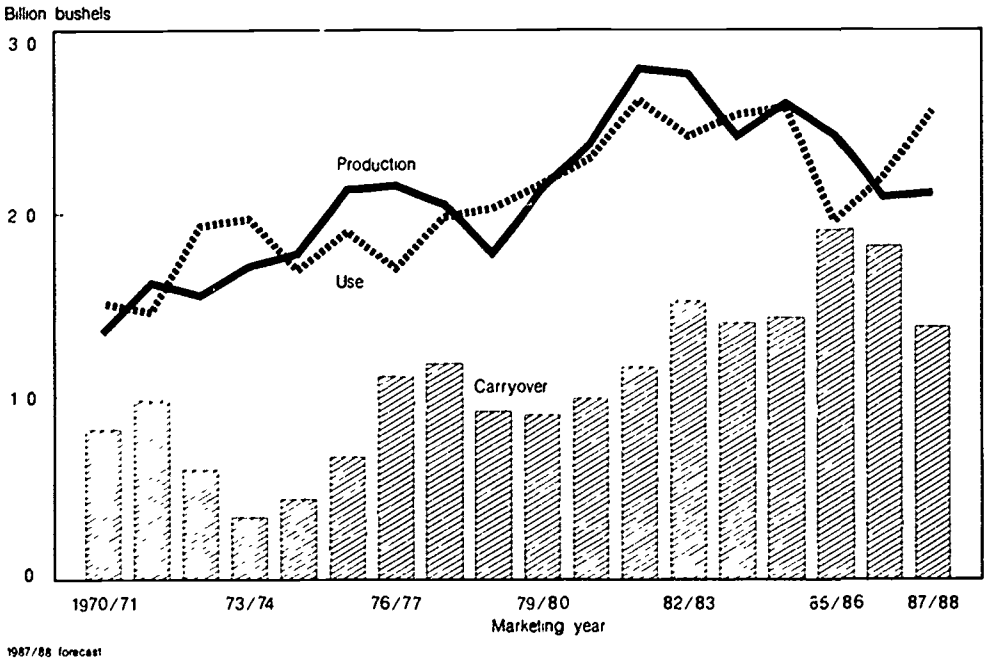
U.S. wheat production will rise 1 percent in 1987/88, with prices forecast at $2.55-$2.65 per bushel, compared with $2.42 per bushel in 1986/87.

World Wheat Trade and U.S. Share



1987/88 forecast. Includes wheat flour; excludes intra-EC trade.

U.S. Wheat Production, Use, and Carryover

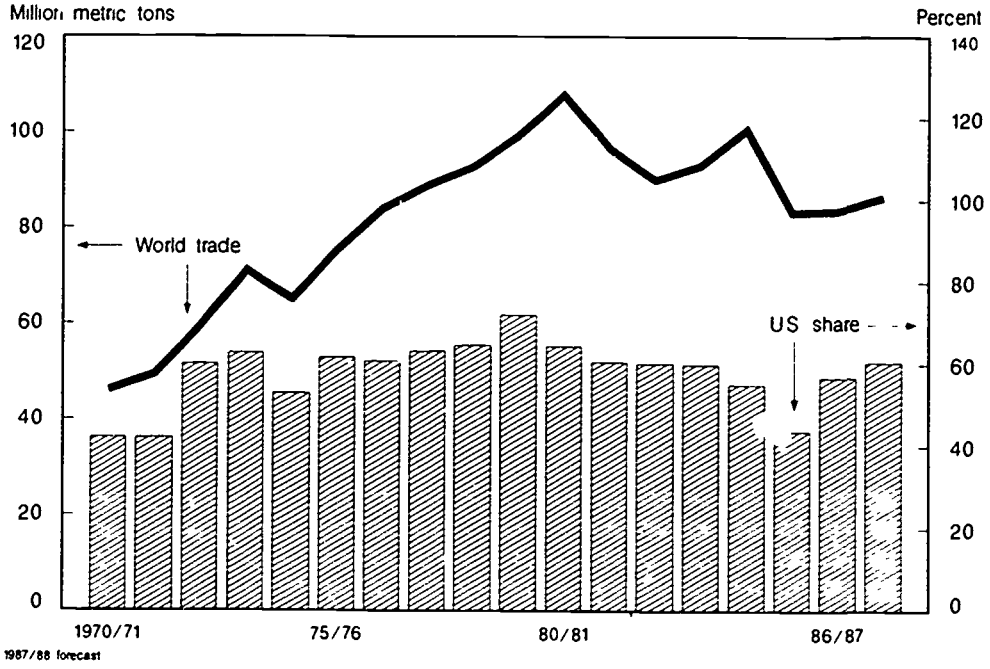


1987/88 forecast

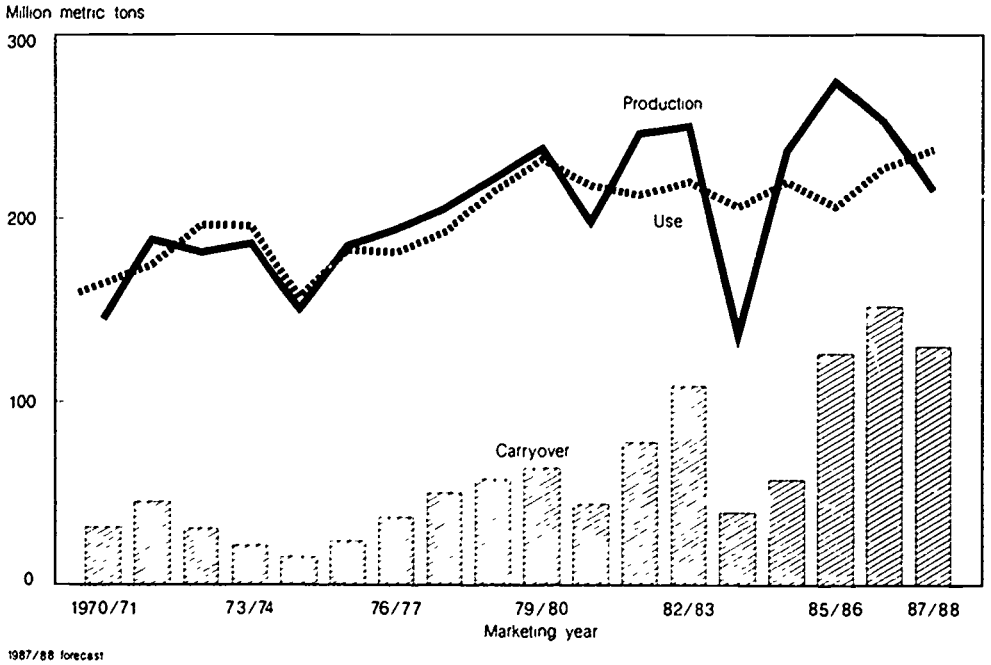
With world feed grain production likely to be down 5 percent in 1987/88, the U.S. share of world grain trade will rise to 60 percent, up from 57 percent in 1986/87.

U.S. 1987/88 feed grain production will decline 15 percent because of lower plantings. The smaller crop and larger exports and domestic use will reduce stocks 10-15 percent below the record high 1986/87 level.

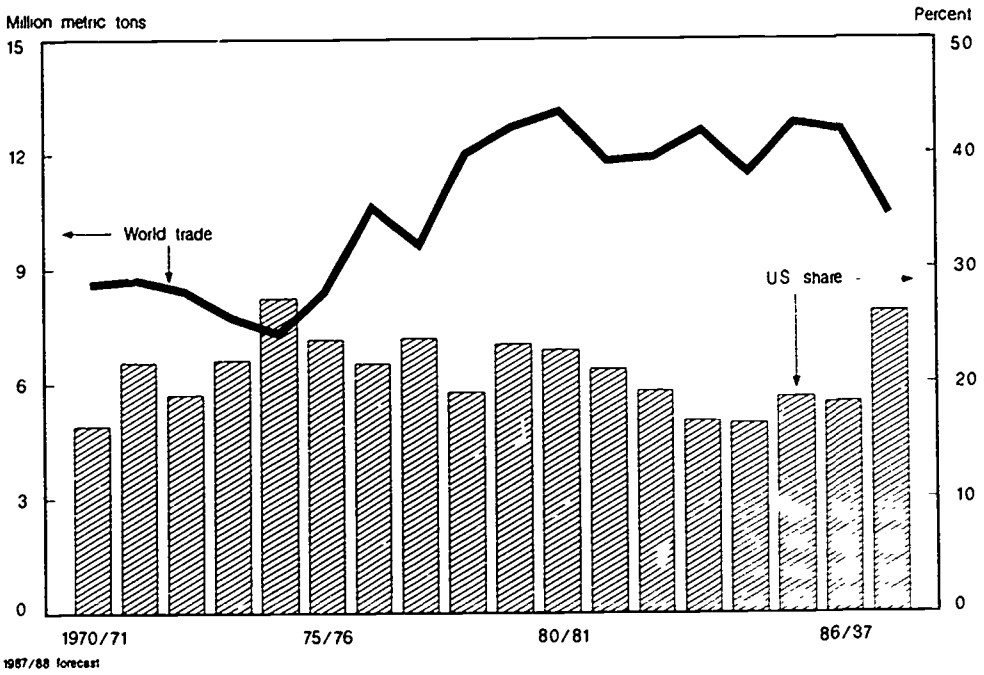
World Feed Grain Trade and U.S. Share



U.S. Feed Grain Production, Use, and Carryover



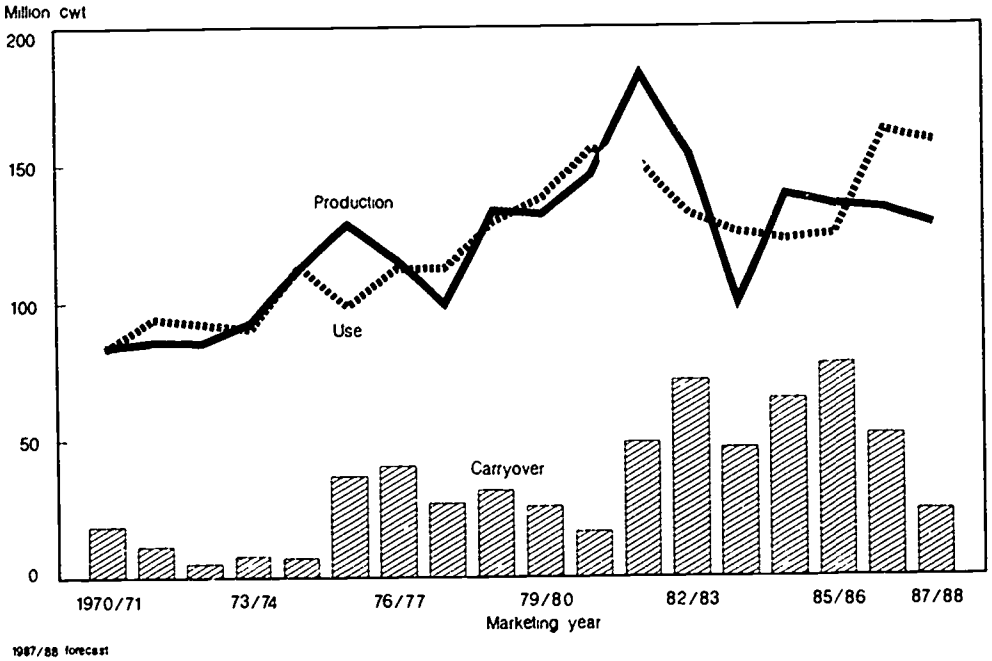
World Rice Trade and U.S. Share



World rice production will likely drop 5 percent as both foreign and U.S. output decline. U.S. rice trade share will likely rise to 26 percent from 18 percent in 1986/87.

U.S. rice ending stocks are forecast down sharply. Both U.S. and world prices are up sharply. U.S. prices will likely average $7.00-$8.00 per cwt in 1987/88, compared with $3.75 in 1986/87.

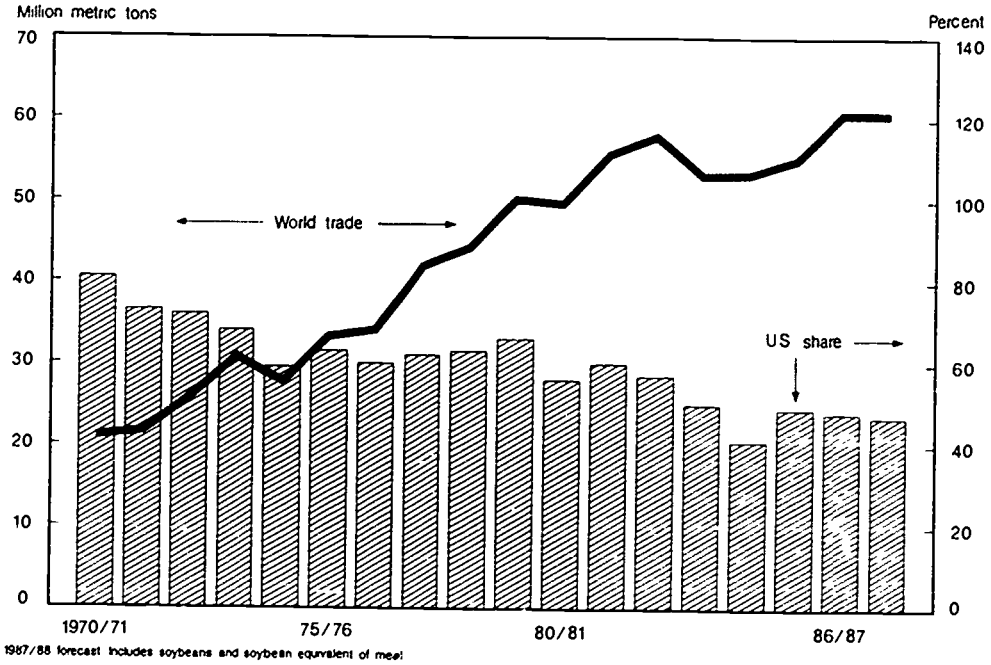
U.S. Rice Production, Use, and Carryover



World exports of soybeans (excluding soybean equivalent of meal) are forecast to rise 1 percent in 1987/88 to nearly 29.0 million tons. Strong competition from other exporters has reduced the U.S. share of soybean trade from 65 percent in 1979/80 to 47 percent today.

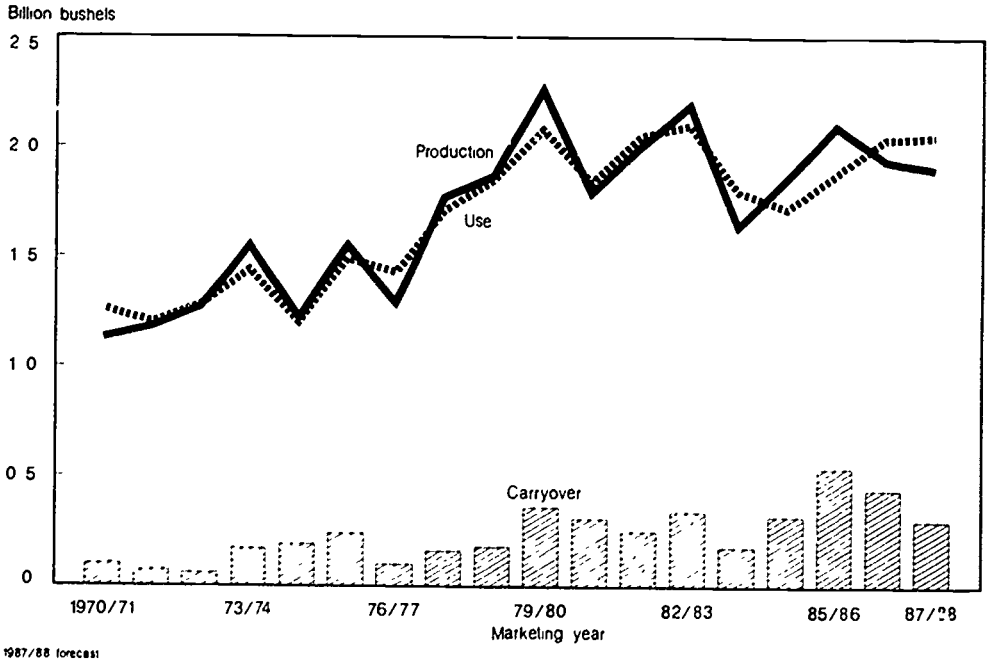
As U.S. soybean acreage fell from a high of 71 million acres in 1979 to 57.4 million acres in 1987, production has dropped from nearly 2.3 to 1.9 billion bushels.

World Soybean Trade and U.S. Share



1987/88 forecast includes soybeans and soybean equivalent of meal

U.S. Soybean Production, Use, and Carryover

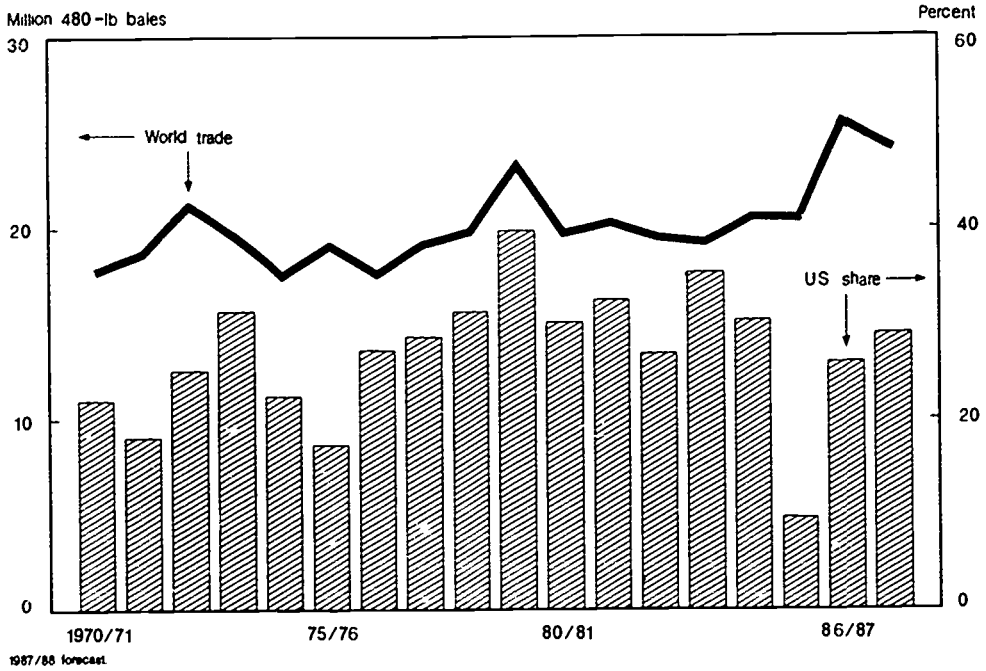


1987/88 forecast

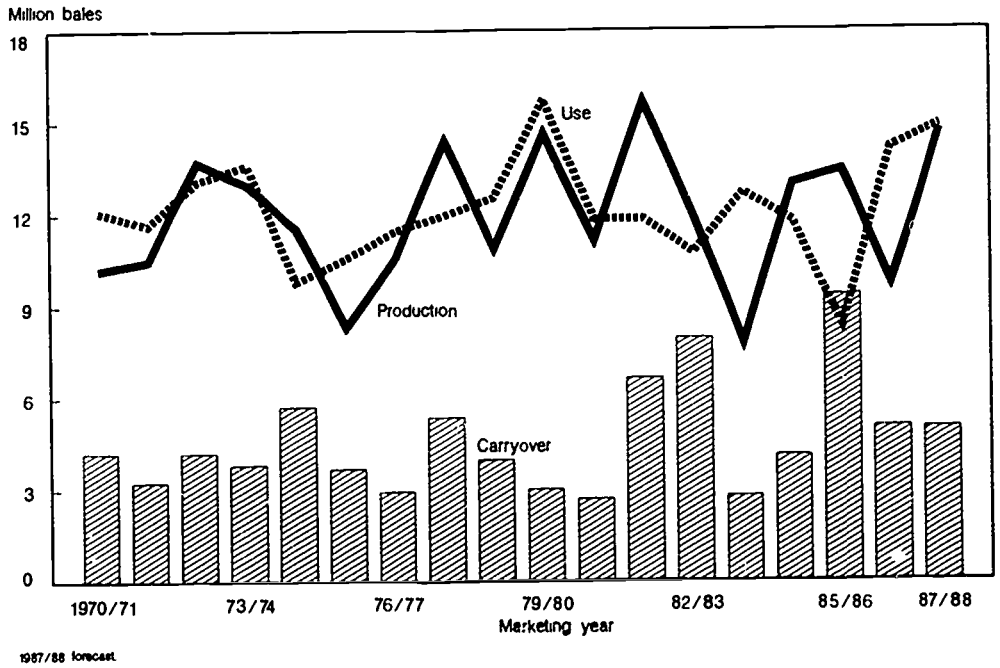
The U.S. share of world cotton trade is estimated at 29 percent, slightly above last season and sharply above 1985/86 when U.S cotton was not competitive in world markets.

Larger acreage and record yields boosted the 1987 cotton crop to 14.7 million bales, up more than 50 percent from 1986.

World Cotton Trade and U.S. Share



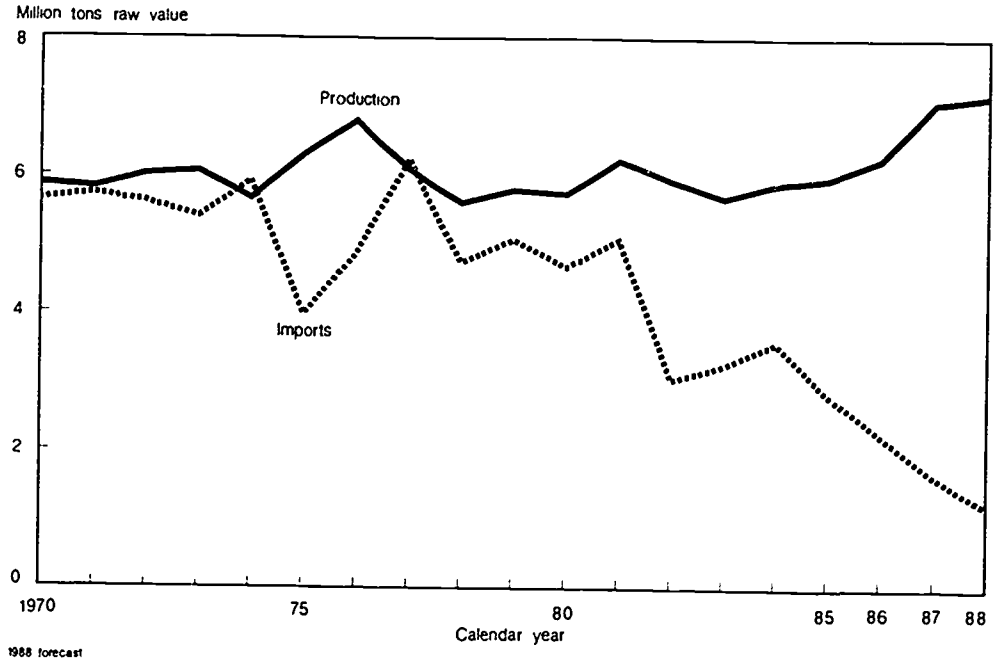
U.S. Cotton Production, Use, and Carryover



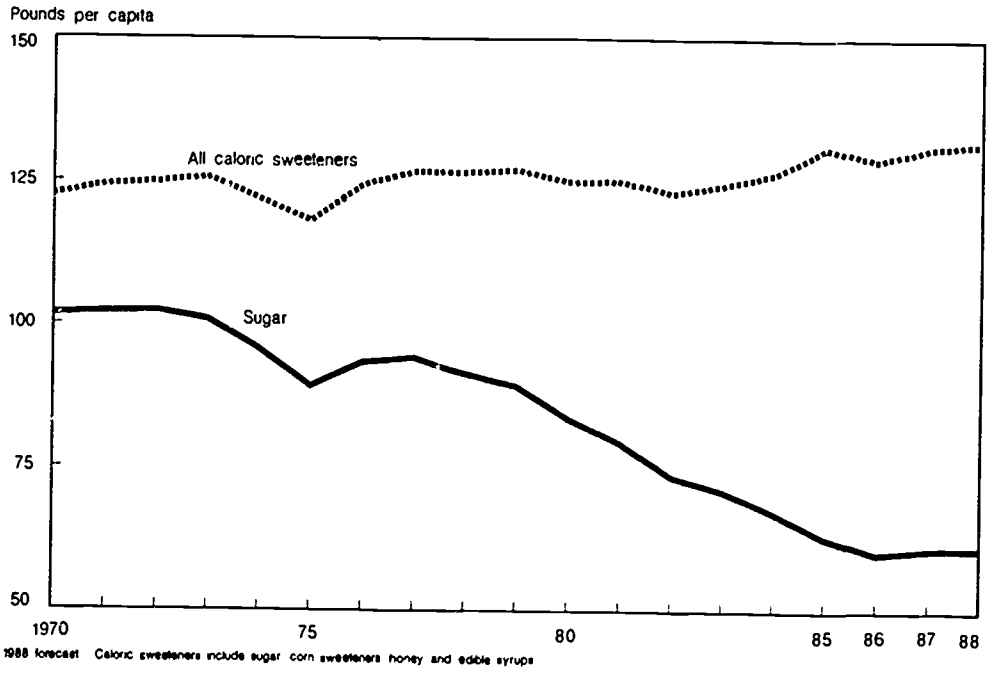
Record U.S. sugar production of over 7.3 million tons is forecast for 1987/88. Increased beet plantings and record beet yields and record cane acreage all contribute to the expected 10-percent rise in output.

Sugar and sweetener consumption is expected to increase modestly for the second year in a row to 8.1 million tons. With production outpacing consumption, the U.S. sugar import quota was reduced again to 758,000 tons for 1988, compared with 1 million tons in 1987 and 3 million tons in 1984.

U.S. Sugar Production and Imports



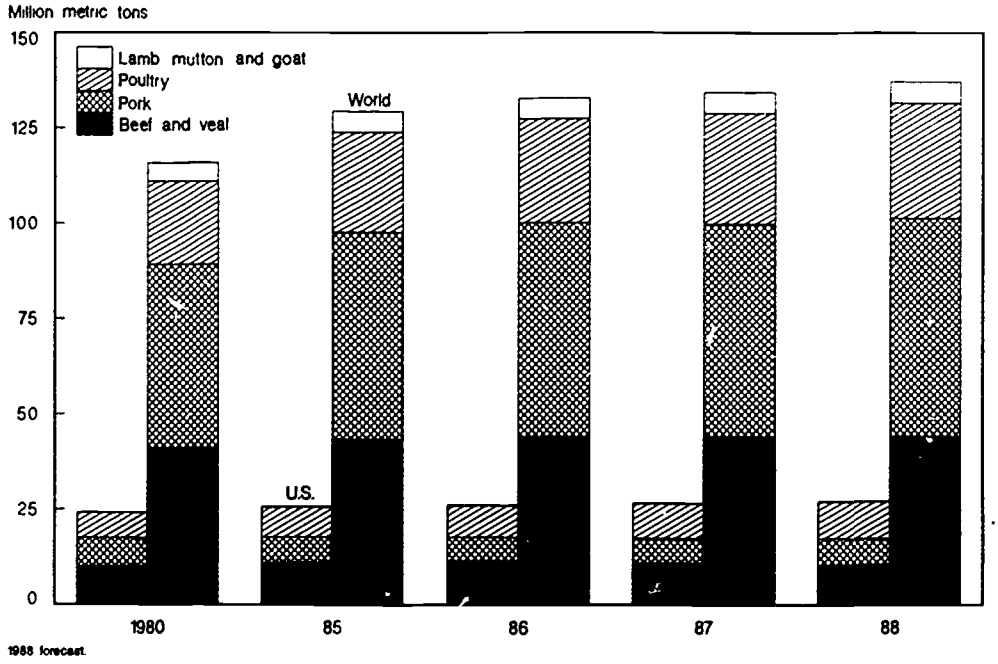
U.S. Caloric Sweetener Consumption



Meat and Livestock Production

U.S. livestock producers face a year of record-large meat supplies. Rising output of pork and poultry will more than offset slippage in beef production. Expanding total meat output will keep prices under strong pressure and, with higher feed costs, will drop producer returns from 1987 levels. Milk production began to increase in the last half of 1987 as the Dairy Termination Program came to an end.

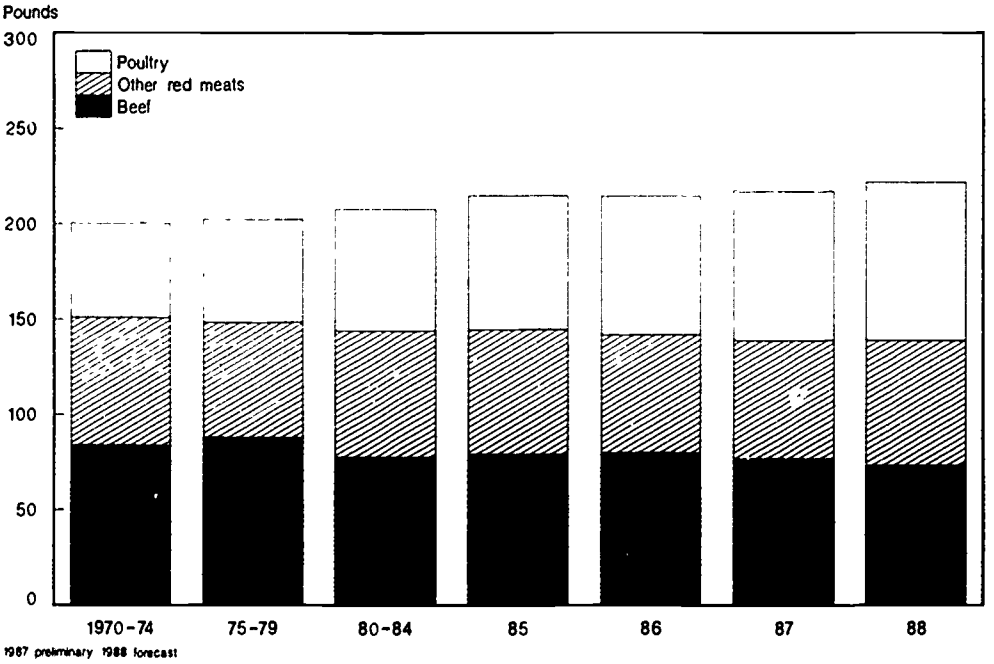
U.S. and World Meat Production



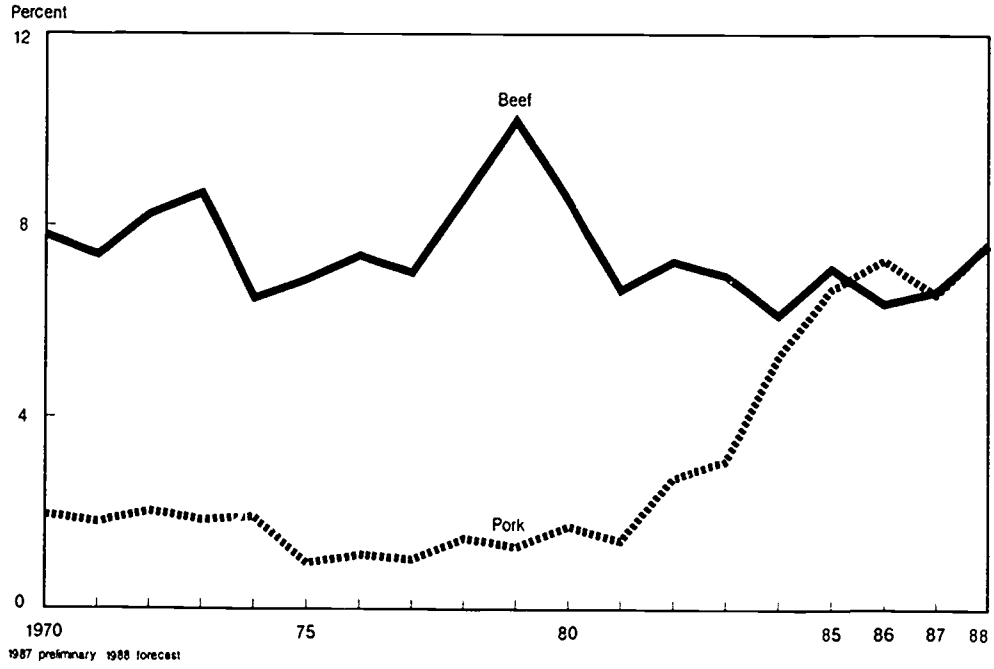
World meat production will rise slightly in 1988, with gains in pork and poultry likely.

U.S. per capita meat consumption rose about 2 pounds in 1987 to a record 217 pounds. Consumption in 1988 could approach 222 pounds per capita as gains in pork and poultry more than offset further decline in beef.

U.S. Per Capita Meat Consumption



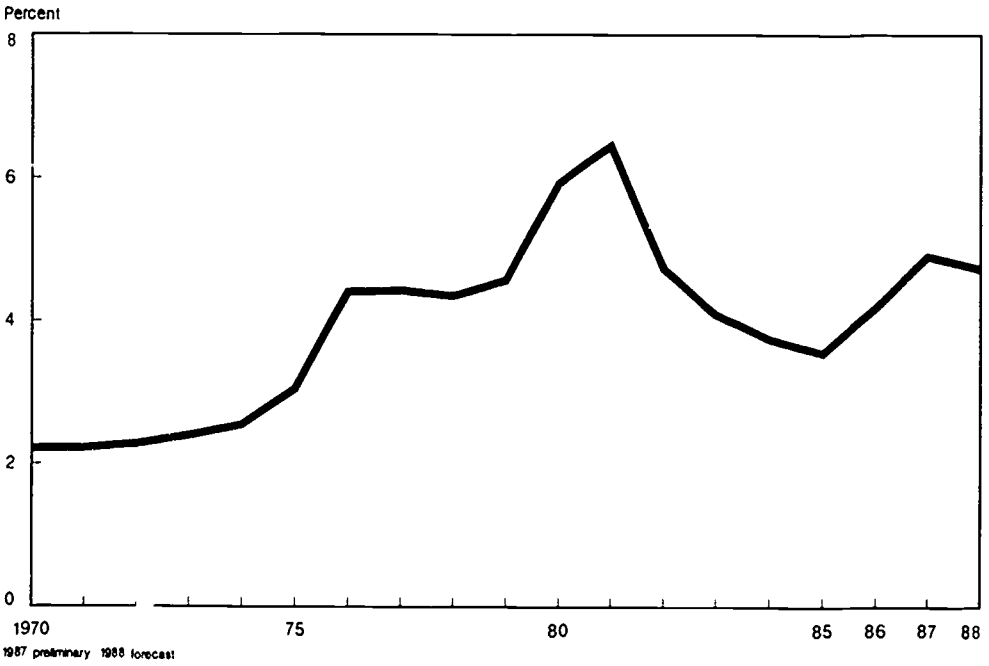
Net Meat Imports as Percent of U.S. Production



Imports of both beef and pork rose in 1987, totaling about 3.45 billion pounds. Beef imports in 1988 are expected to remain near last year's level, while pork imports are expected to rise further.

U.S. broiler exports were up sharply in 1987, aided by continued growth in exports to Japan and by the Export Enhancement Program. Exports are expected to remain strong in 1988.

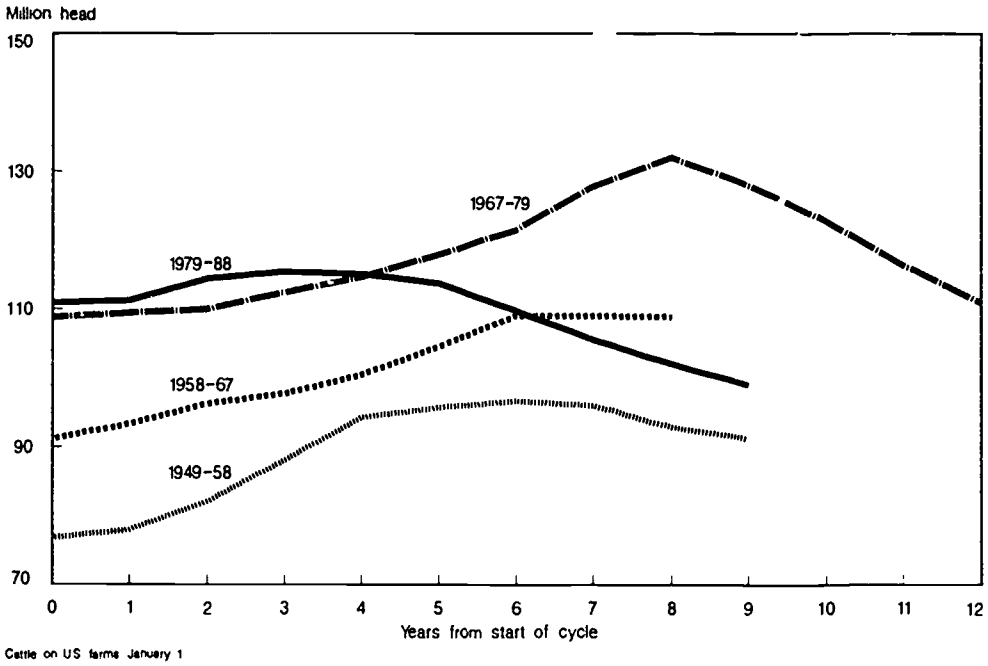
Net Poultry Exports as Percent of U.S. Production



U.S. cattle inventory fell 3 percent in 1987 and on January 1, 1988, was the lowest since 1961, pointing to another decrease in beef production. Beef production fell 3 percent last year as nonfed cattle slaughter dropped.

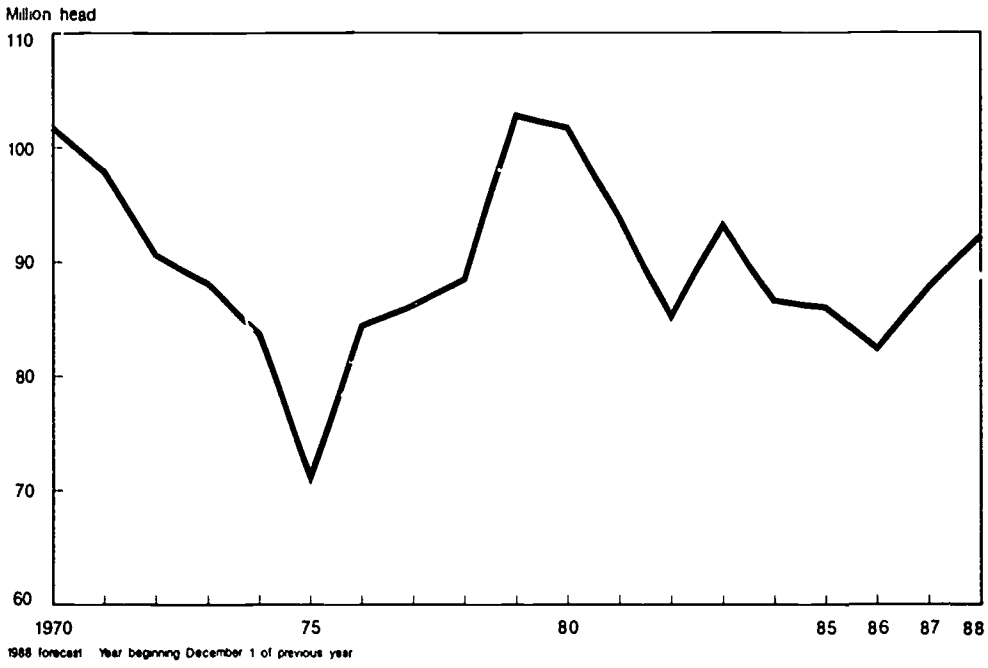
Hog producers have responded to good returns the past few years by increasing hog numbers. The December 1, 1987, inventory was up 6 percent from the previous year. Production is expected to increase 6-8 percent this year.

U.S. Cattle Cycles



Cattle on US farms January 1

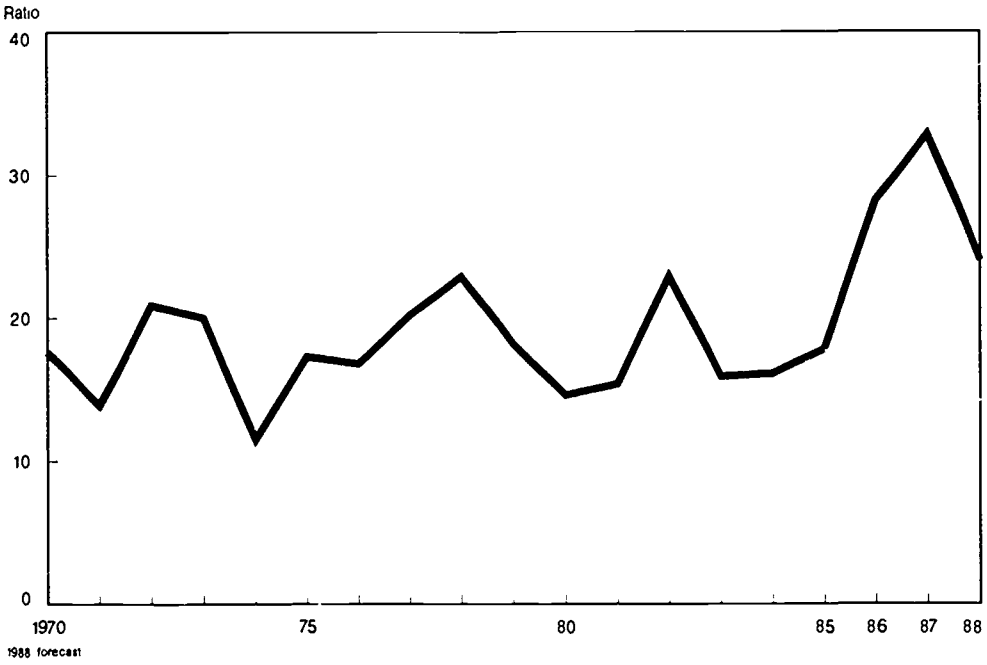
U.S. Pig Crop



1988 forecast Year beginning December 1 of previous year

The hog/corn price ratio (bushels of corn equivalent in value to 100 pounds liveweight of hogs) set a record high in both 1986 and 1987, but has begun to decline as rising pork production has resulted in lower hog prices and corn prices have risen.

Hog-Corn Price Ratio



Cattle on Farms, January 1

Item	1970	1975	1980	1985	1986	1987	1988P
				Million head			
Cattle on farms	112.4	132.0	111 2	109.7	105.5	102.0	99.0
All cows	48.8	56.9	47 9	46.2	44.8	44.3	43.3
Beef cows	36 7	45.7	37 1	35 4	33.6	33.8	33.0
Dairy cows	12.1	11.2	10.8	10.8	11.2	10.5	10.3

P = preliminary.

Hogs on Farms

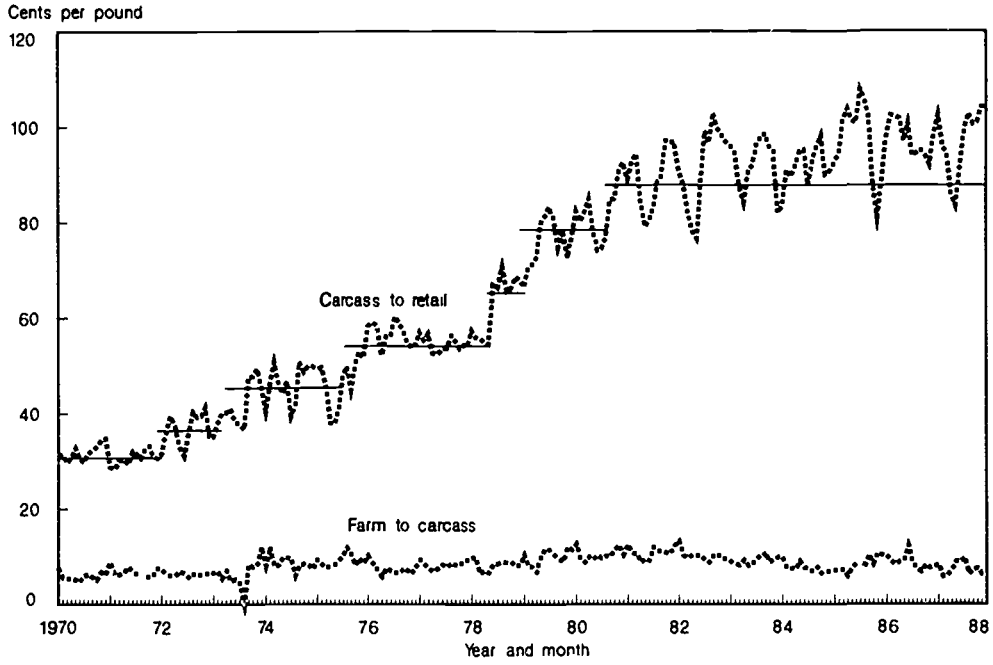
Item	1970	1975	1980	1985	1986	1987	1988
				Million head			
All hogs and pigs[1]	57.05	54.69	67.32	54.07	52.31	50.92	53 8
Kept for breeding[1]	9.19	7.39	9.65	6.93	6 78	6 67	7.02
Market[1]	47.86	47.30	57.67	47.14	45.53	44.25	46.77
U.S. pig crop	102	71	102	86	82	88	90-94F

F = forecast. [1]December preceding year.

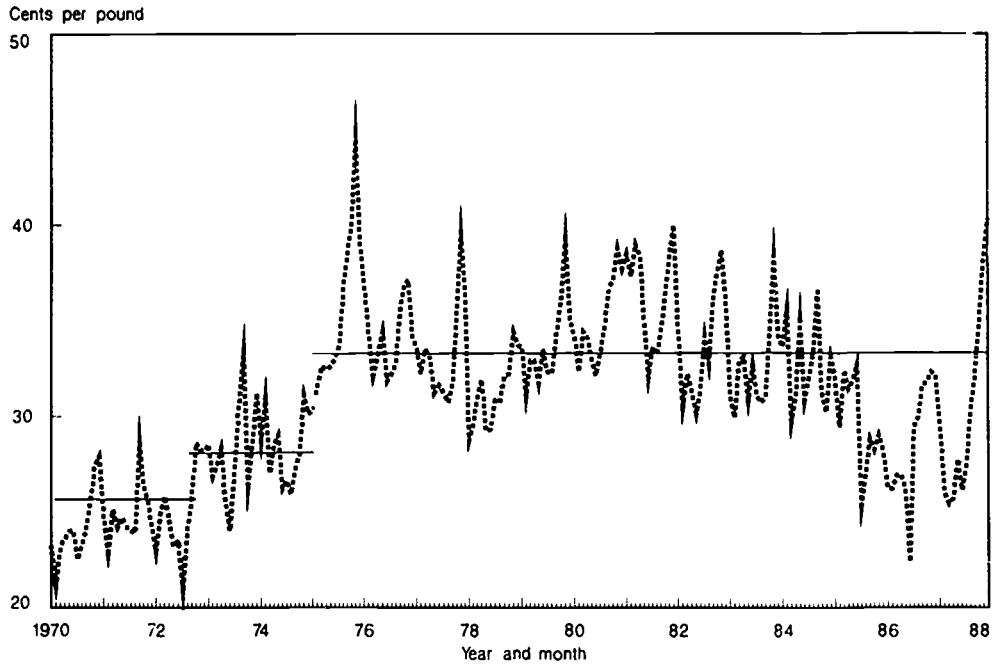
The farm-to-retail price spread for beef in 1987 was down nearly 2 percent from 1986, with most of the decline in the farm-carcass portion. Retail beef prices in 1988 are expected to average near the 1987 level.

Retail pork prices rose almost 6 percent in 1987. The farm-to-retail price spread for pork in 1987 was up about 10 percent from 1986. The farm-wholesale spread increased 6 percent in 1987.

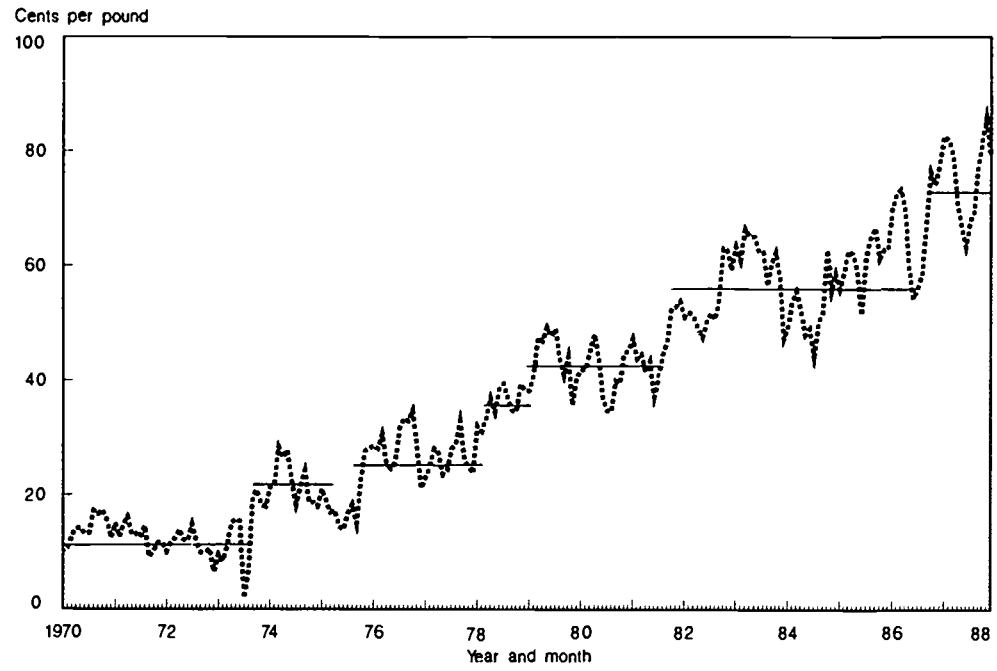
BEEF: Price Spread



PORK: Farm to Wholesale Spread



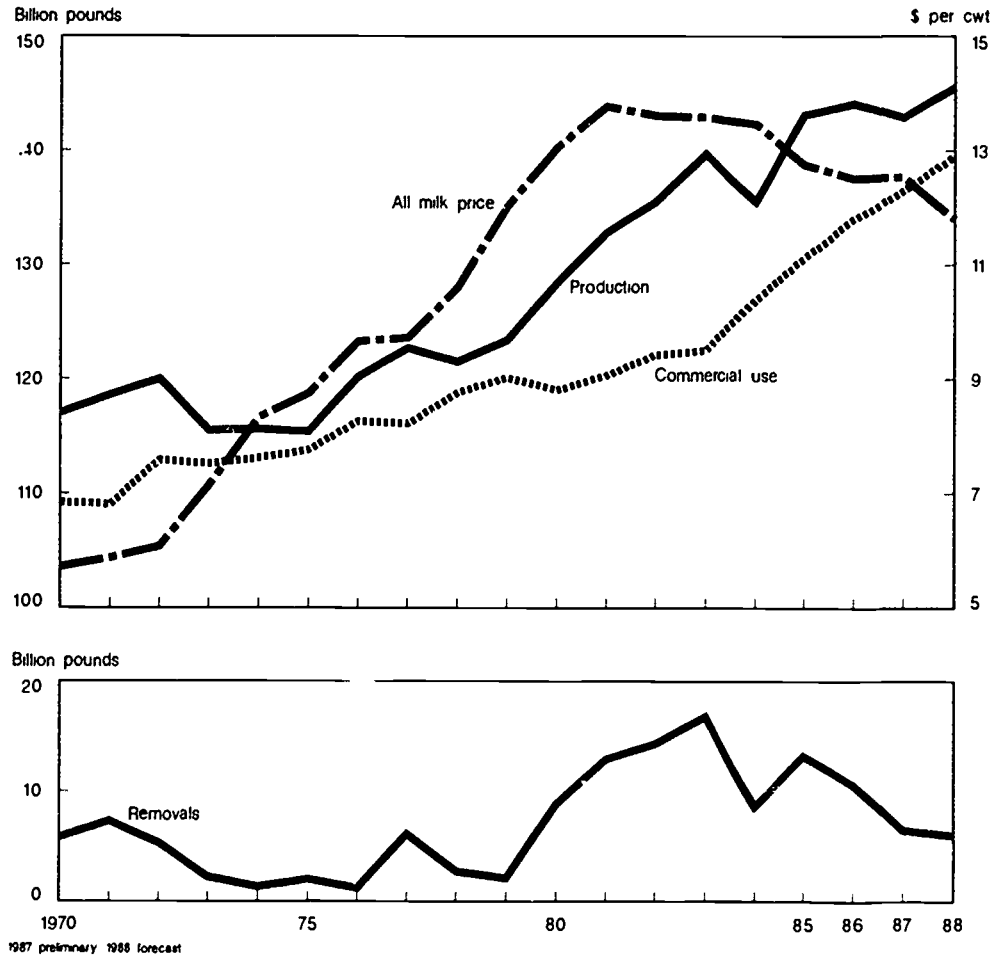
PORK: Wholesale to Retail Spread



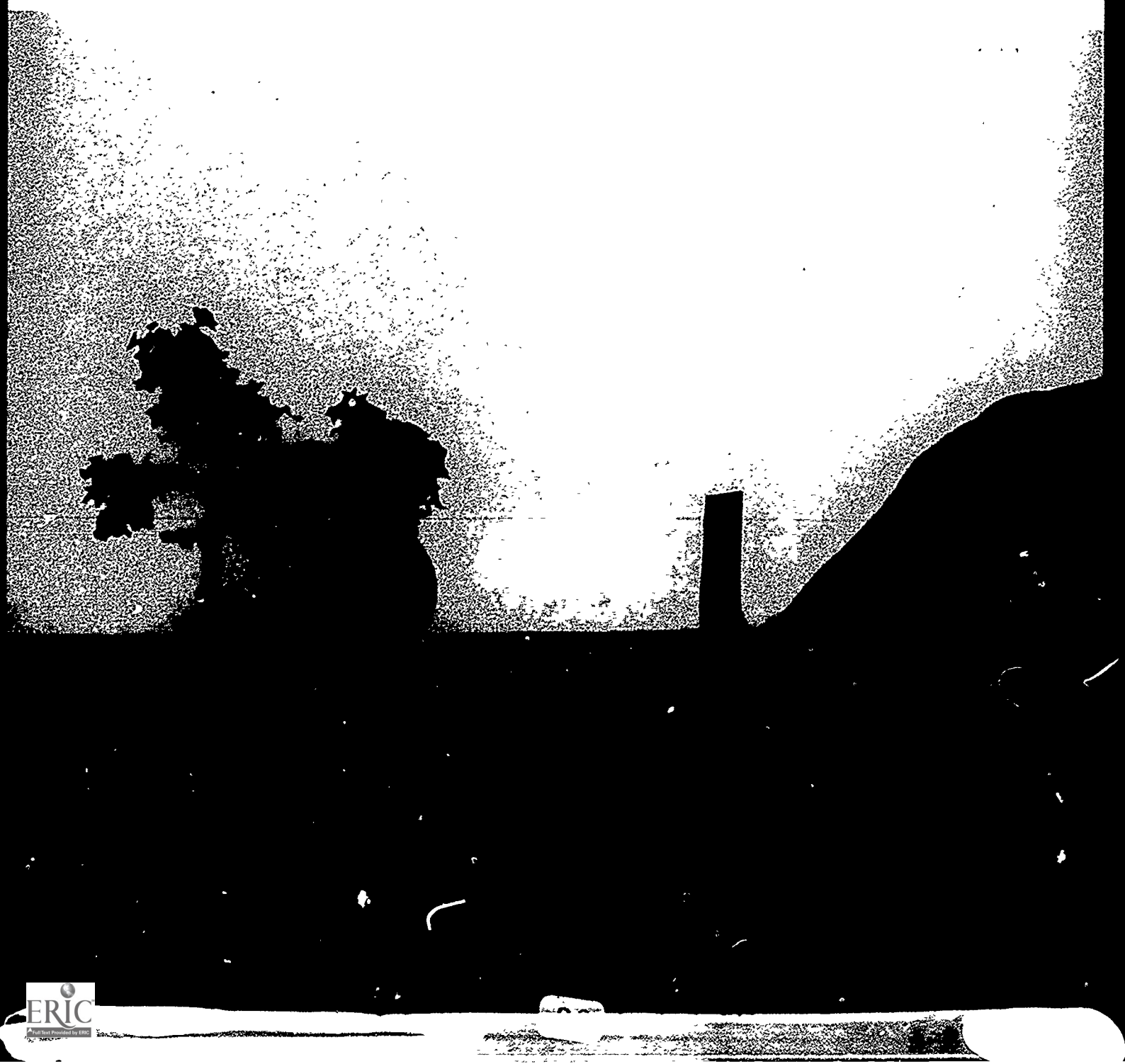
The wholesale-retail price spread for pork climbed 12 percent in 1987. Retail pork prices are expected to decline in 1988 as the pork supply increases, with prices averaging 5-7 percent below 1987.

The price support for milk was reduced 50 cents per cwt effective January 1, 1988, because Commodity Credit Corporation (CCC) net removals for 1988 were projected to exceed 5.0 billion pounds. Milk production will likely increase 1-3 percent in 1988.

U.S. Milk Production, Uae, Prices, and Removals



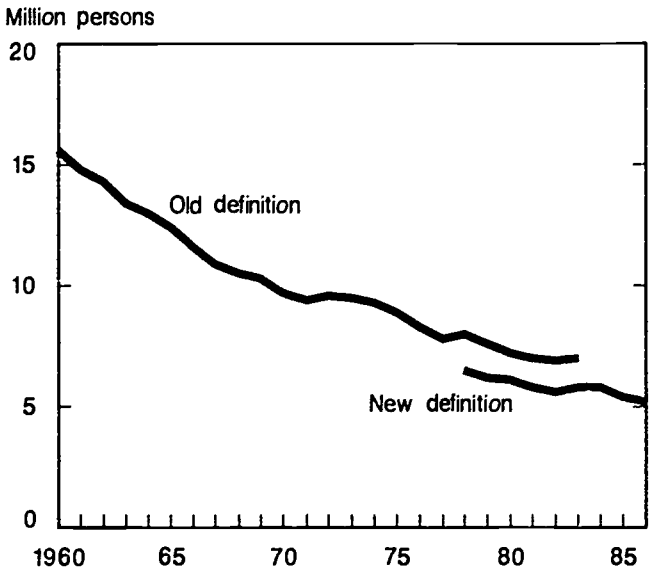
Background Charts for U.S. Agriculture



Farm Population

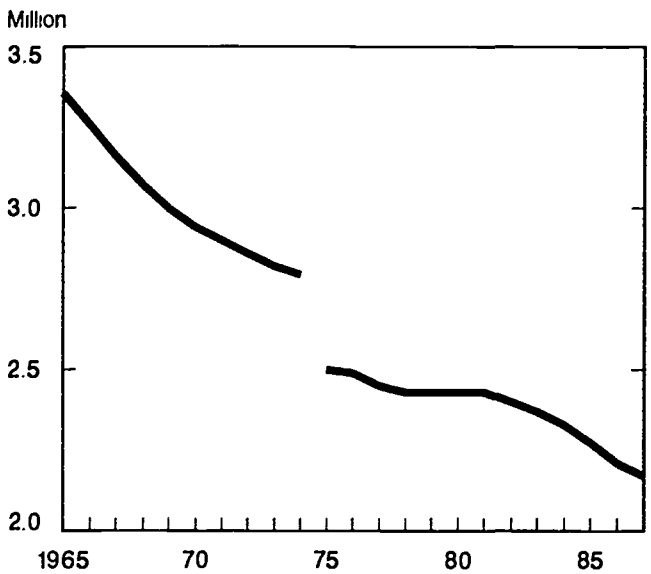
Number of farms and farm residents continues to decline, while median age of the farm population continues to rise. About 5.2 million people lived on 2.2 million farms in 1986. Total farm-related population numbered 11.3 million in 1983.

Chart 1
Farm Population



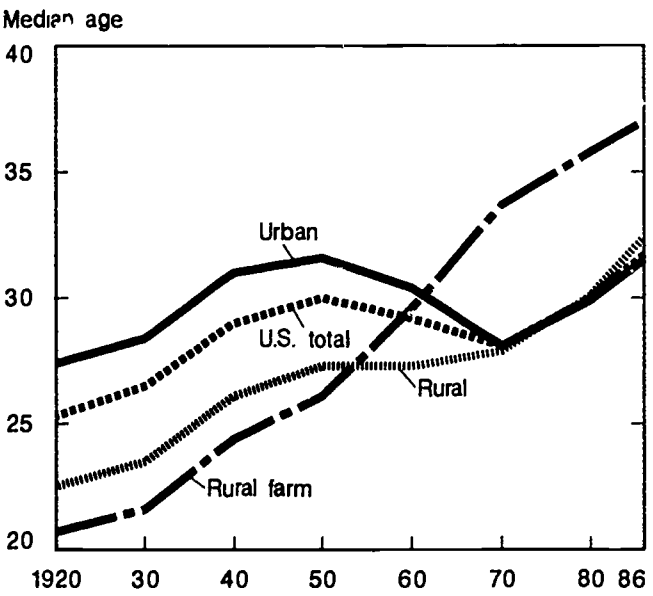
The farm population includes all people living on rural farms For farm definitions, see 1974 Census of Agriculture. Source: Bureau of the Census

Chart 2
Number of Farms



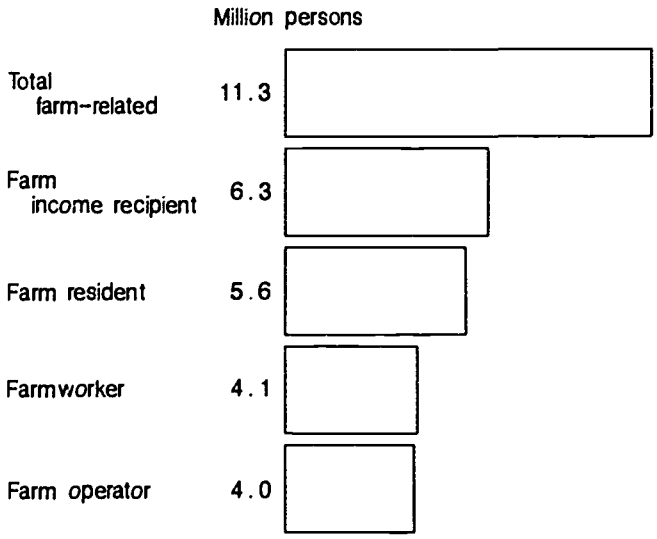
Starting with 1975, a farm is a place as of June 1 that sells $1,000 of agricultural products during the year

Chart 3
Median Age of the Population by Residence



Source: Bureau of the Census.

Chart 4
Farm-Related Populations

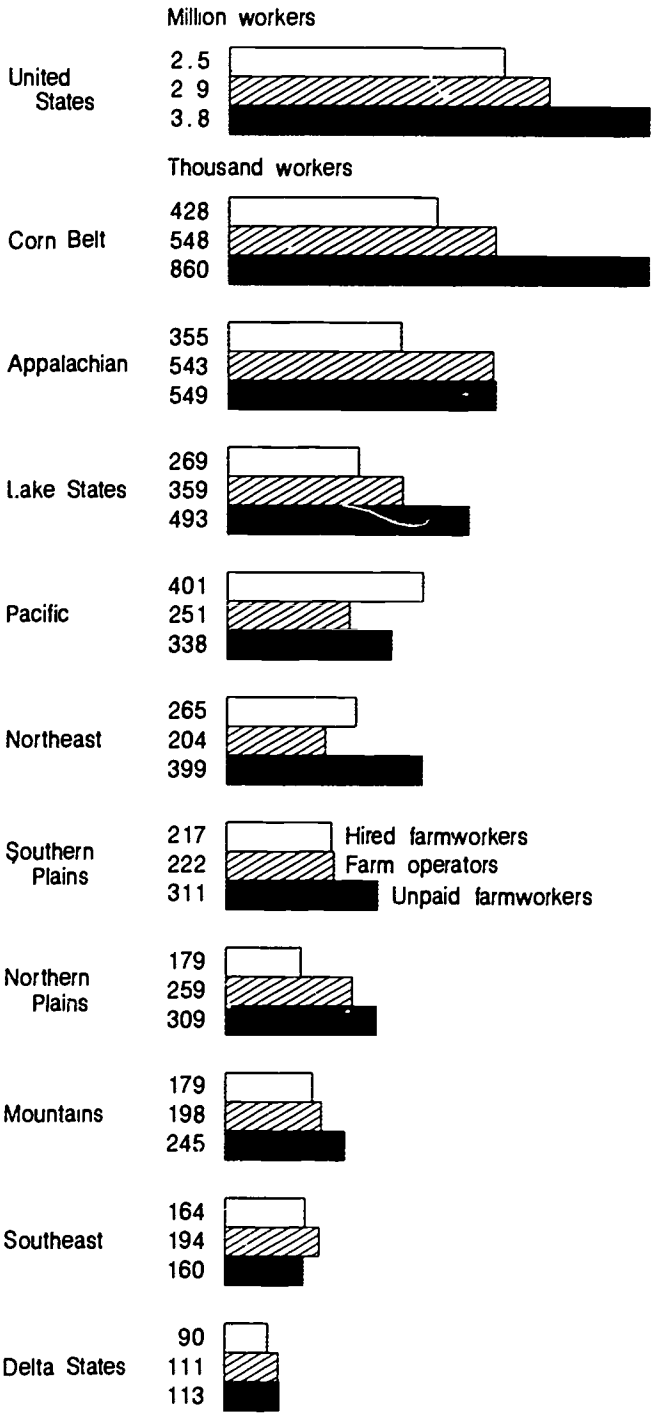


March 1983 data Persons living in households on farms and/o with a farm income recipient and/or farm operator or farmworker Categories are not mutually exclusive Source: Bureau of the Census

Farmworkers

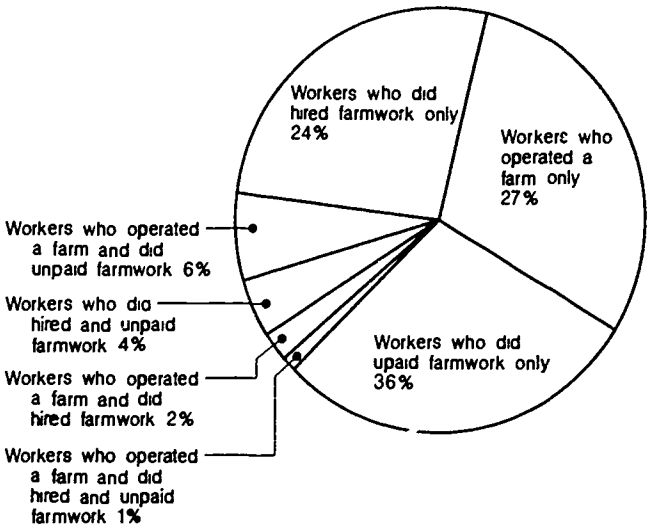
About 8.1 million people did some farmwork during 1985, including 2.5 million hired farmworkers, 2.9 million farm operators, and 3.8 million unpaid farmworkers. Over 1 million workers, or 13 percent of the agricultural work force, performed in more than one of these categories.

Chart 5
Number of Farmworkers by Region



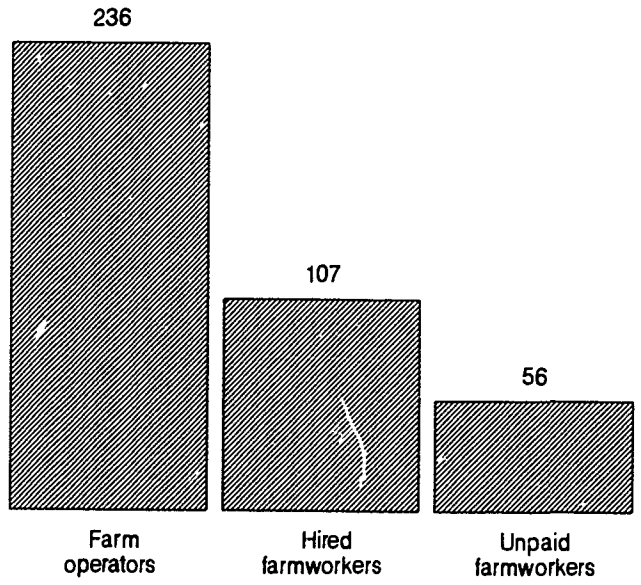
1985 data

Chart 6
Components of the Agricultural Work Force



1985 data

Chart 7
Average Days of Farmwork by the Agricultural Work Force



1985 data

Income

Gross farm income totaled $159.6 billion in 1986, down 4 percent from 1985. Net farm income rose 16.1 percent as returns to operators rose 21.1 percent. Net cash income rose 9.9 percent, net cash flow rose 4.8 percent, and net business income rose 20.7 percent.

Chart 8
Components of Gross Farm Income

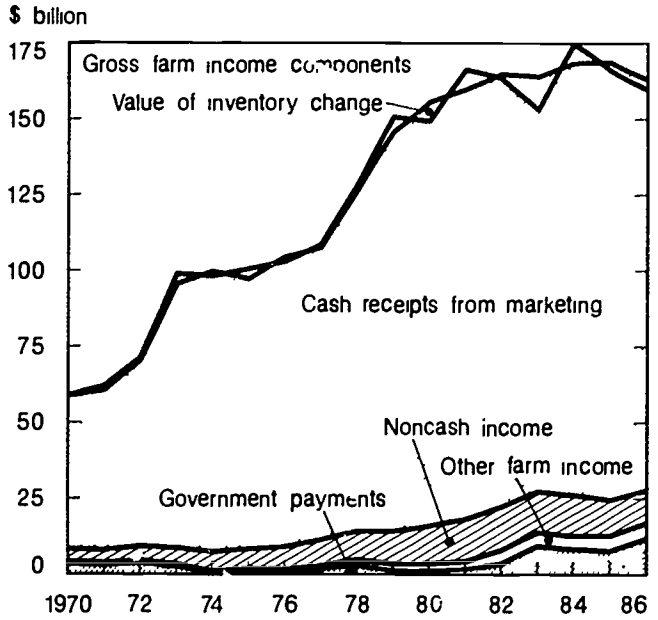
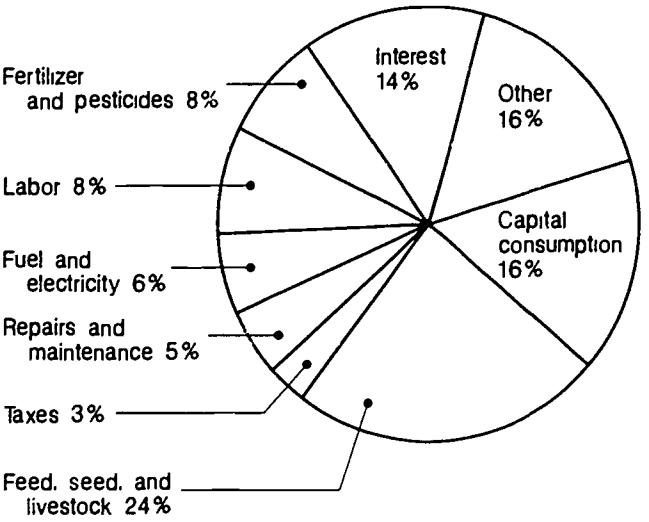
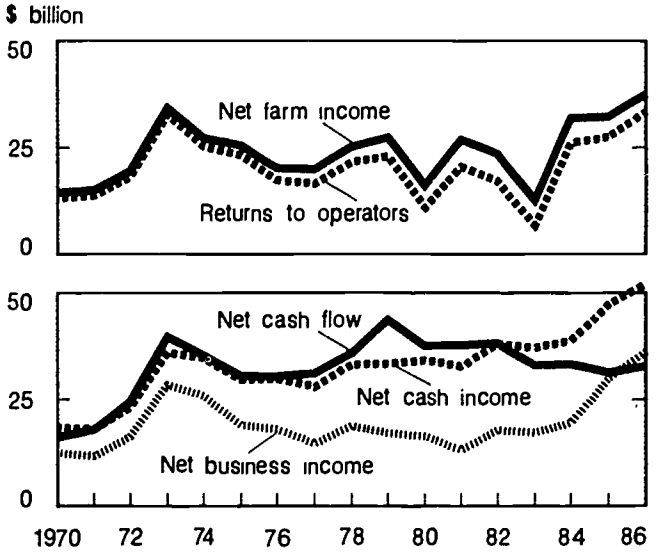


Chart 9
Components of Farm Production Expenses



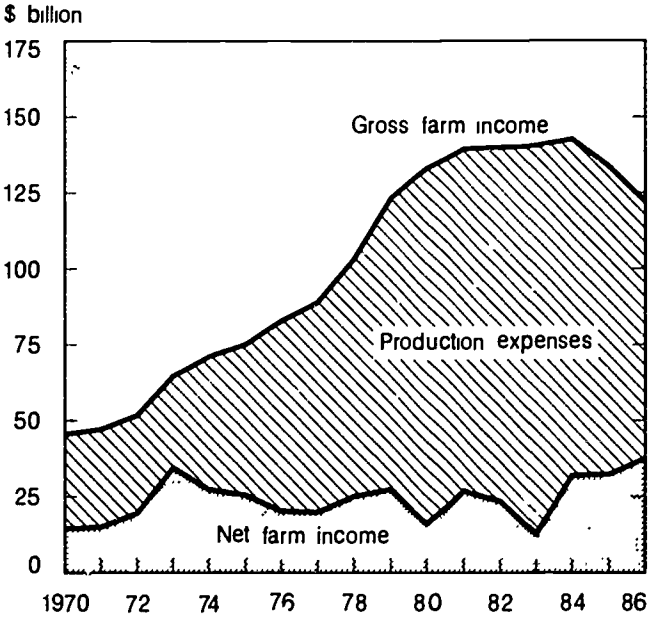
1986 data Includes operator farm dwellings

Chart 10
Measures of Farm Income



Net cash income excludes household expenses and noncash income and expenses
Net cash flow is net cash income including annual change in debt plus rent paid to landlords, less capital expenditures

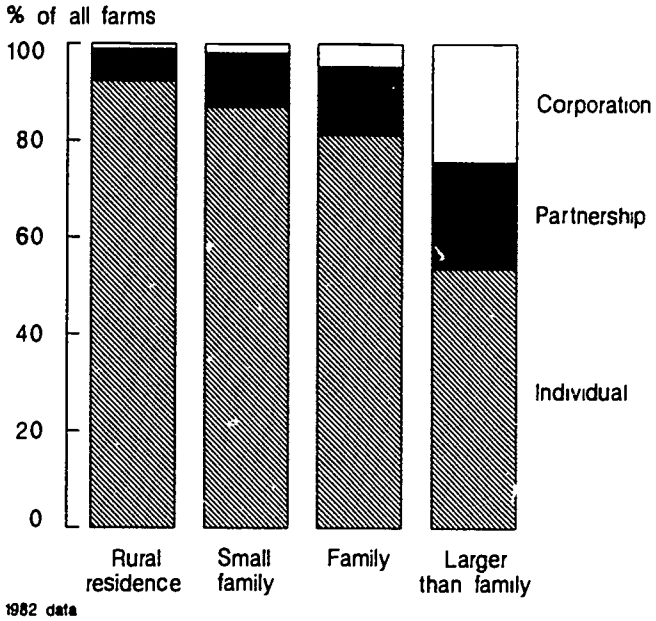
Chart 11
Net Farm Income



Income

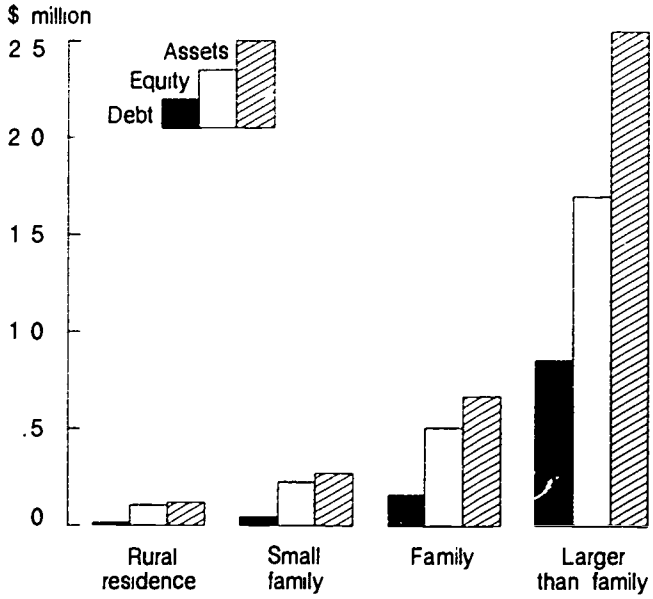
As farm size increases, the percentage of sole proprietor farms drops, as does the importance of off-farm income. Debt as a percentage of assets falls as farm size increases. The largest farms have the largest share of gross cash income.

Chart 12
Farm Organization by Size of Farm



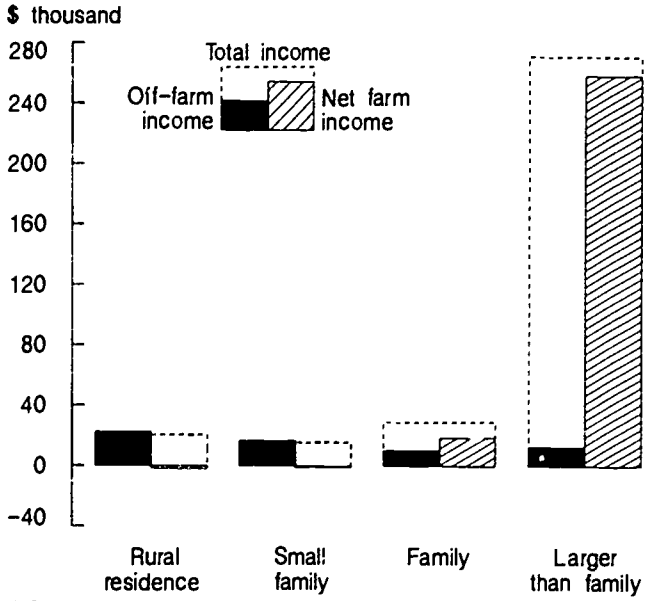
1982 data

Chart 13
Farm Operator Debt and Equity by Size of Farm



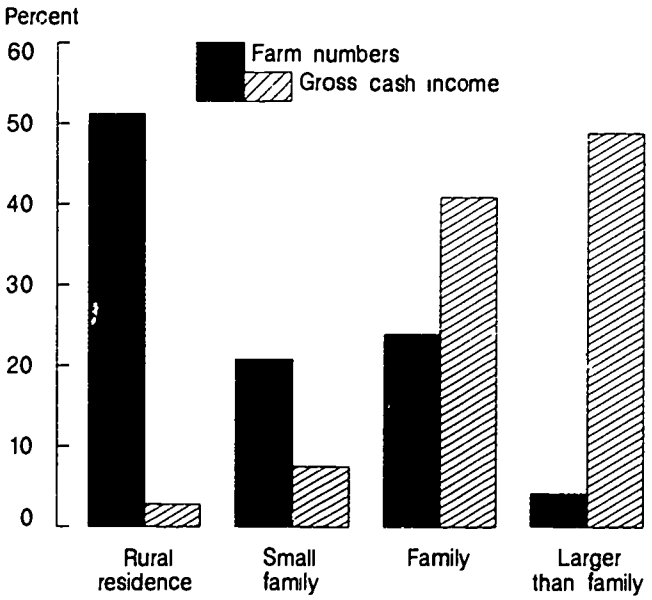
1985 data

Chart 14
Total Farm Operator Income by Size of Farm



1985 data

Chart 15
Distribution of Farms and Gross Cash Income by Size of Farm



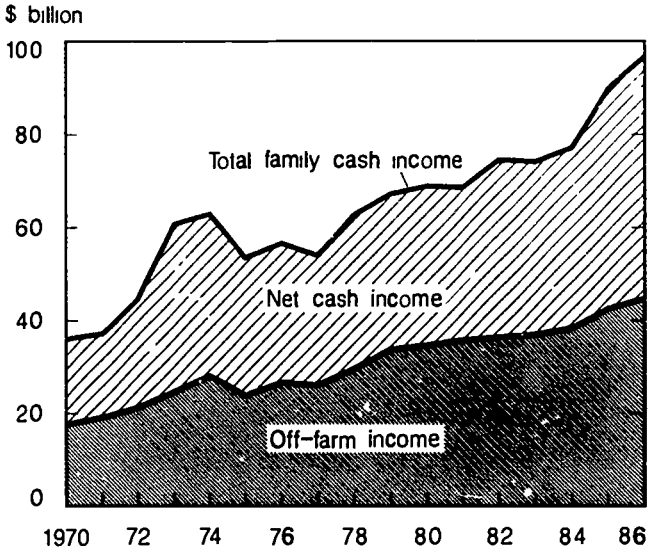
1985 data

Income

Total family cash income, the sum of net cash income and off-farm income, rose 7.7 percent in 1986. Farms with sales over $100,000 represented 14 percent of all farms but 76 percent of the cash receipts from marketing farm commodities.

Chart 16

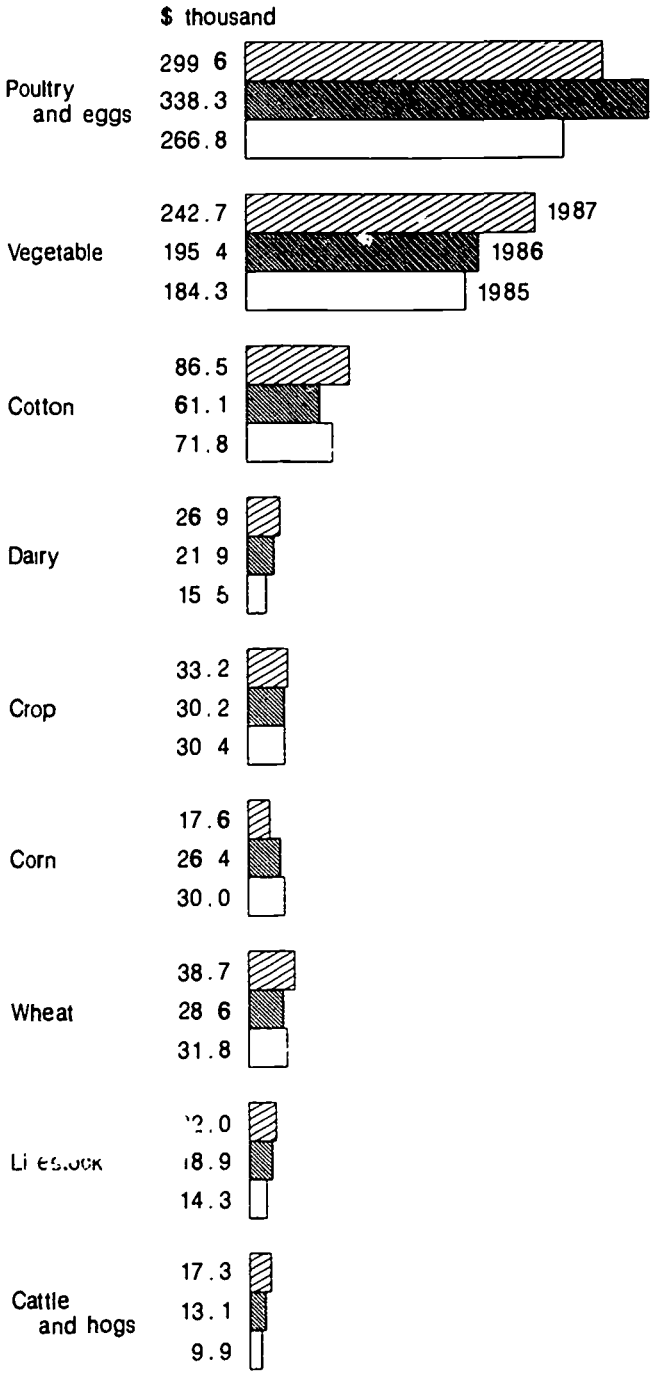
Cash Income of Farm Operator Households



Net cash income includes an adjustment for changes in yearend crop and livestock inventories and represents returns to operator families' labor capital and management

Chart 17

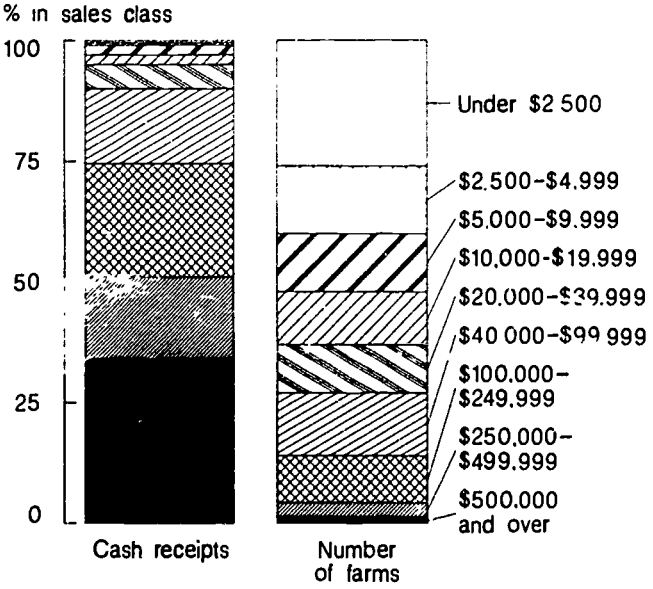
Net Cash Distribution of Income by Type of Farm



1987 forecast These distributions are per farm averages, not actual observed data

Chart 18

Cash Receipts and Farms by Sales Class



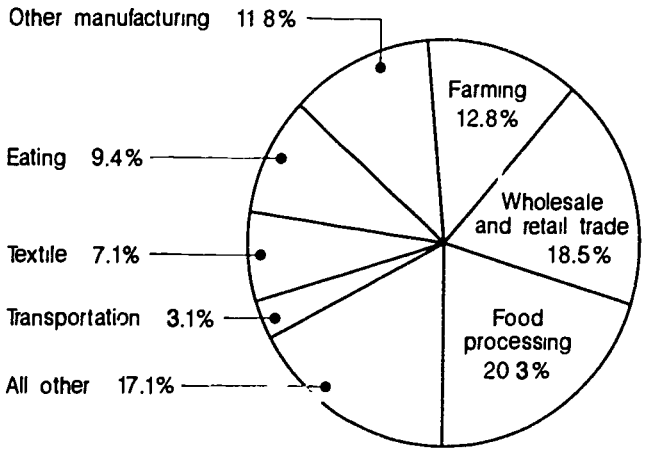
1986 data Cash receipts from farm marketings include net CCC loans

Food and Fiber System

The food and fiber system employed 21 million workers in 1986, or 17.9 percent of the civilian work force. Personal consumption expenditures for food accounted for most of the final demand for crop output and almost all the final demand for livestock output in 1986.

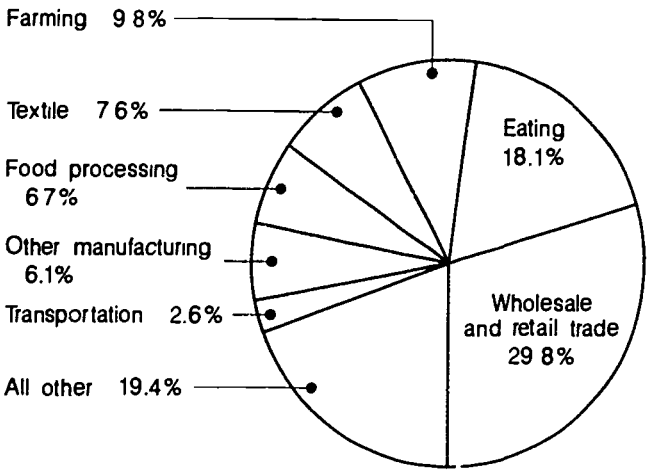
Chart 19
Total Output by Sectors of the Food and Fiber System

% of $ output



1986 data Total does not add due to rounding

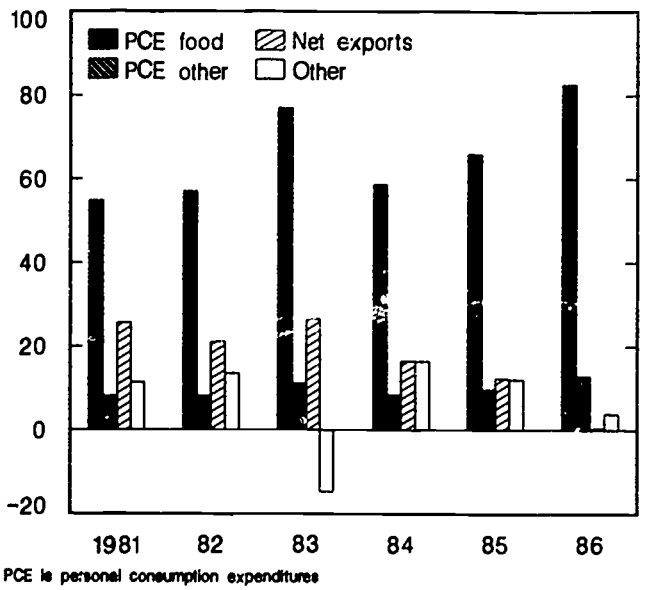
Chart 20
Food and Fiber System Employment



1986 data Total does not add due to rounding

Chart 21
Sources of Demand for Crop Output

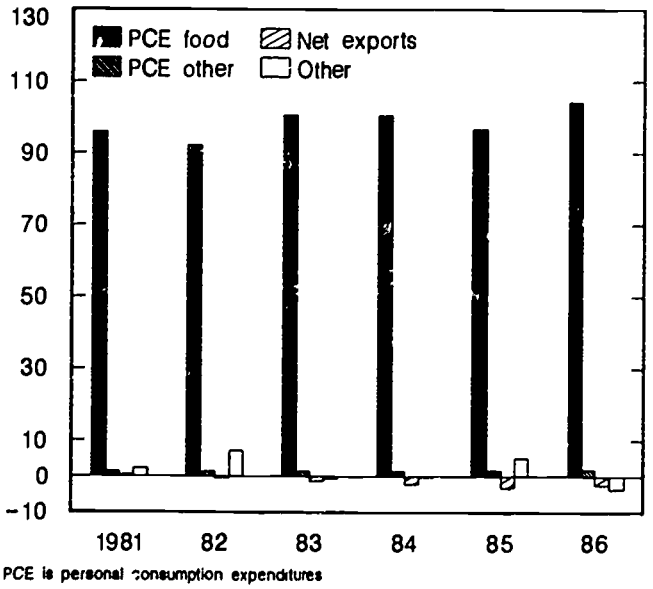
% of total output



PCE is personal consumption expenditures

Chart 22
Sources of Demand for Livestock Output

% of total output



PCE is personal consumption expenditures

Agriculture and the General Economy

After the 1970's export boom, the farm sector resumed its historical downward trend as a share of the general economy. Rapidly rising prices for farm goods during the 1970's contributed to higher consumer prices, but farm prices have had a moderating influence on consumer prices since 1980.

Chart 23

Gross Farm Product Share of Gross National Product

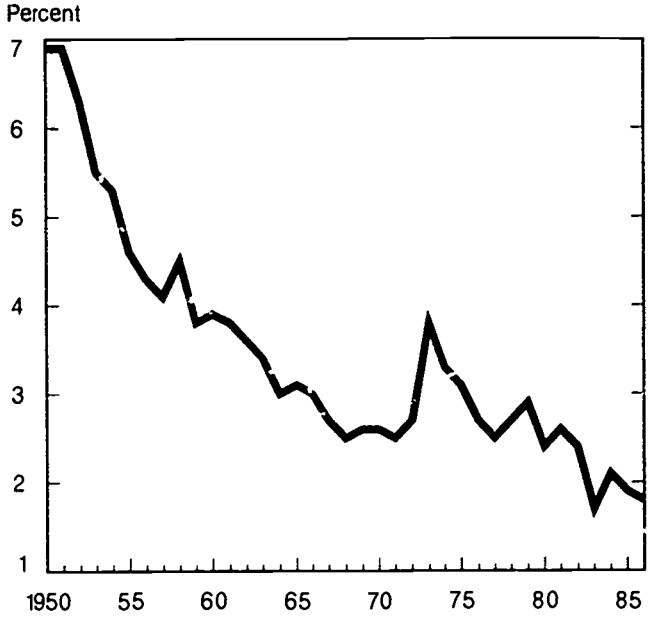


Chart 24

Food and Fiber System Employment As a Percentage of Total Civilian Employment

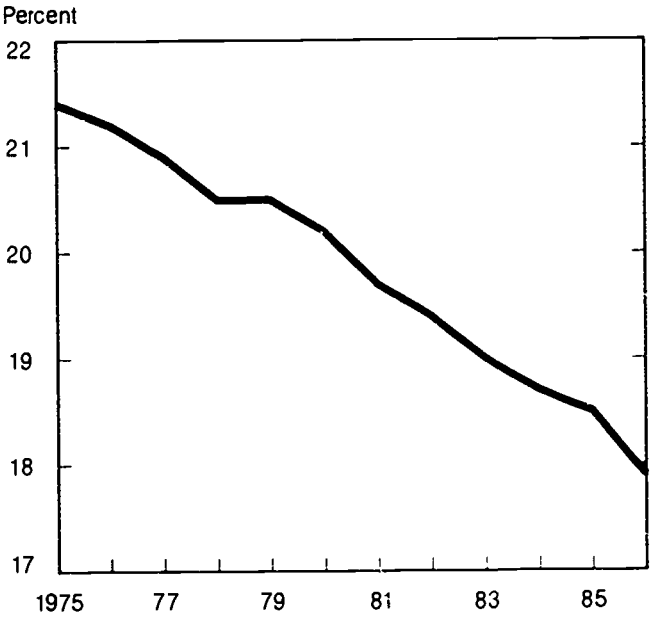


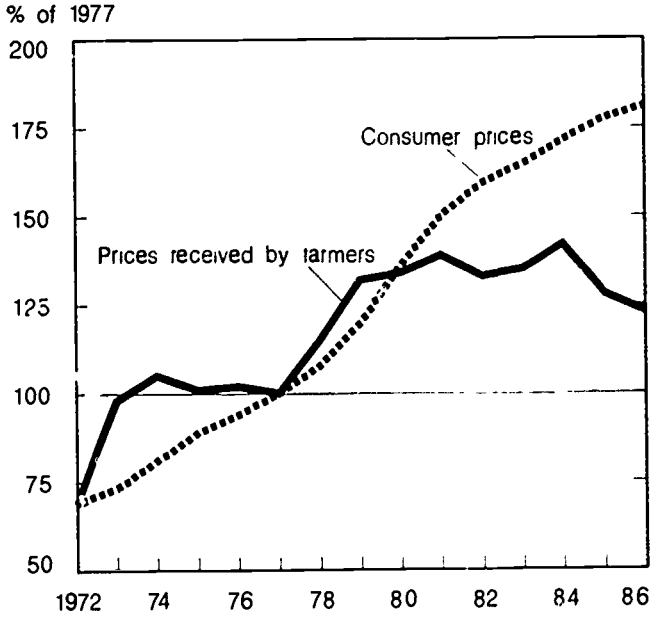
Chart 25

Ratio of Implicit Price Deflators for Gross Farm Product and Gross National Product

An implicit price deflator measures effect of changes in output and input prices on returns to land, labor, and capital. This ratio signals a continued disinvestment from the farm sector because the nonfarm sector can pay more for available productive factors

Chart 26

Consumer Prices and Prices Received by Farmers

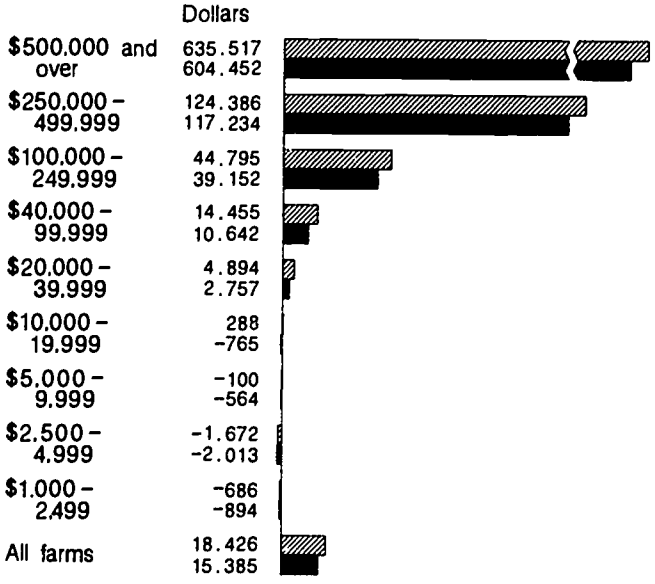


Assets and Finance

Farms with gross sales under $10,000 had negative average net farm income before inventory adjustment. Prices for major commodities were generally lower in 1986 than in 1985. Prices paid by farmers fell due to lower production costs, including interest payments, manufactured inputs, and feed.

Chart 27

Average Net Farm Income by Sales Class



Net income before adjustment for inventory change

Chart 28

Prices Received by Farmers for Major Commodities

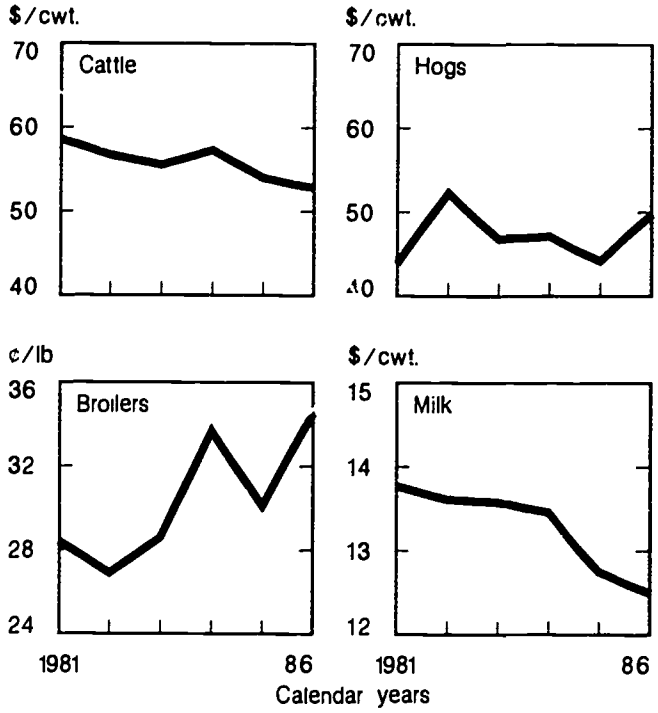
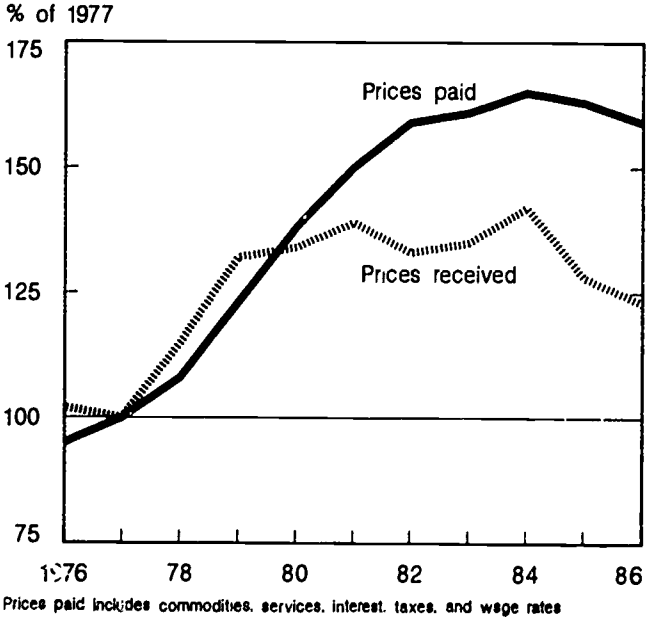
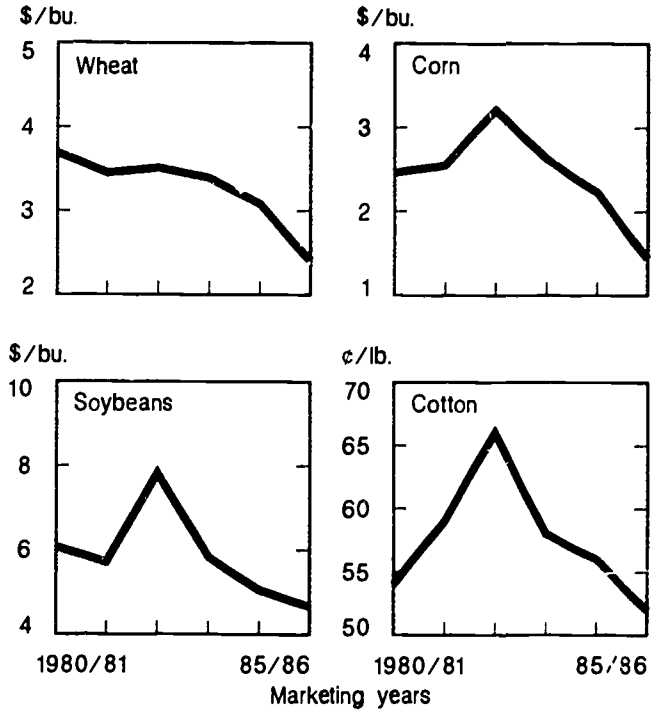


Chart 29

Prices Received and Paid by Farmers



Prices paid includes commodities, services, interest, taxes, and wage rates

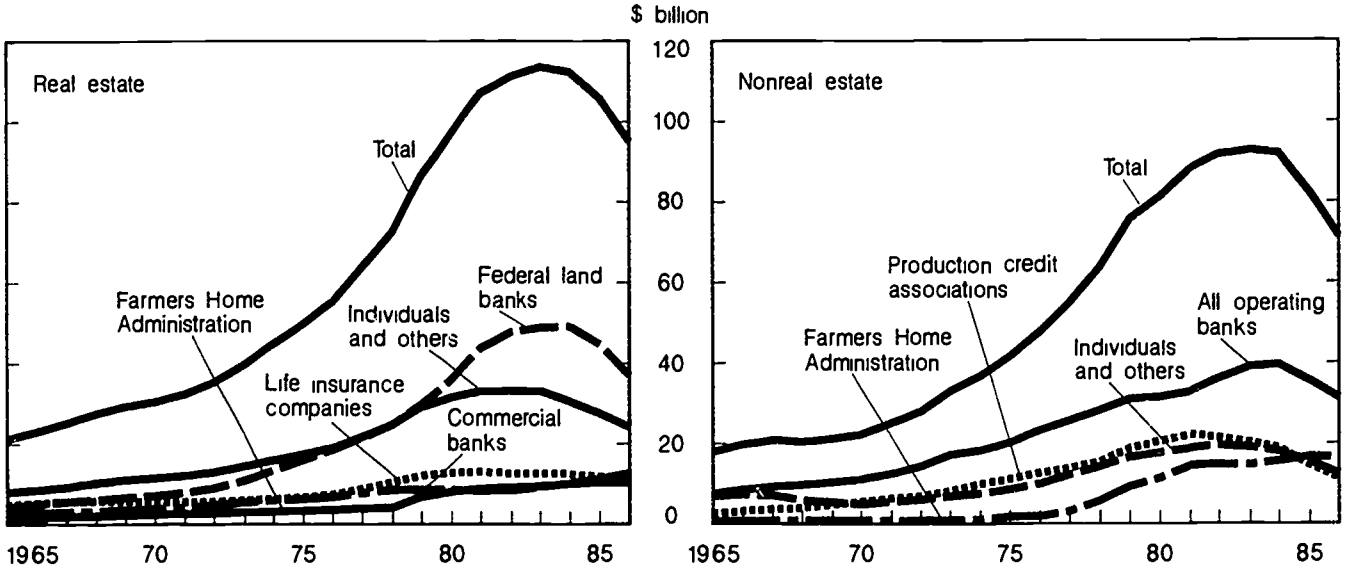


Assets and Finance

Both real estate and nonreal estate farm loans fell during 1986, reflecting lenders' chargeoffs and farmers' attempts to improve cash flow. Real estate and nonreal estate debt-to-asset ratios fell as reductions in debt exceeded the fall in asset values.

Chart 30

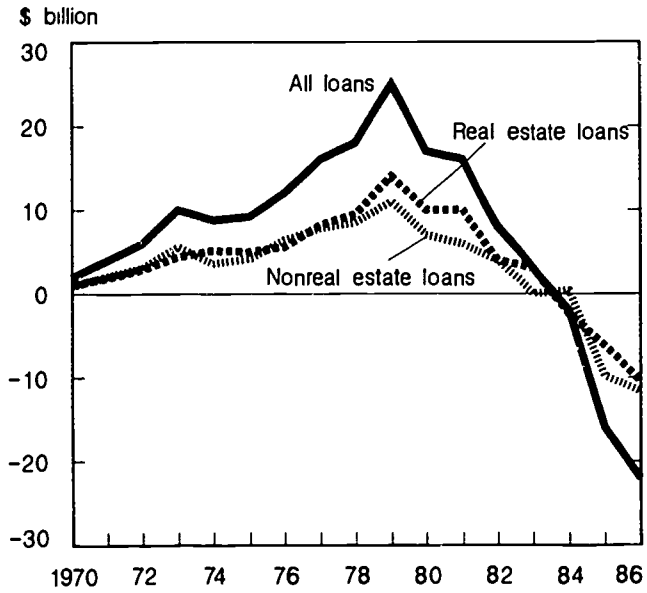
Who Holds the Farm Debt



Individuals and others include Commodity Credit Corporation real estate loans Production credit associations include Federal Intermediate Credit Bank loans to other financial institutions

Chart 31

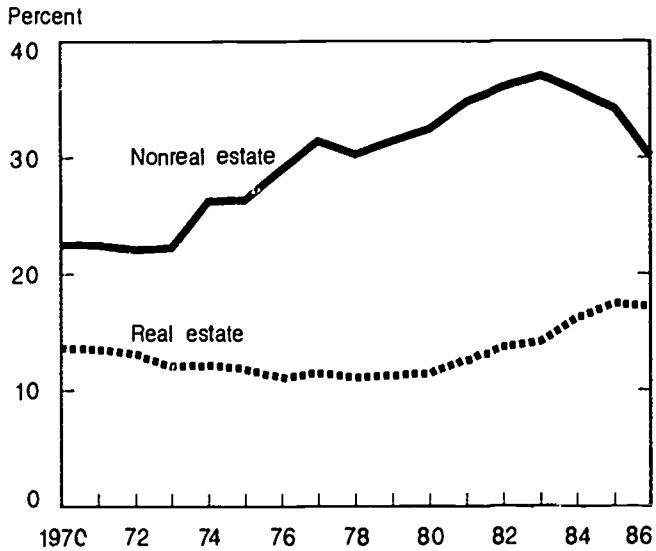
Annual Change in Farm Debt



Difference between debt outstanding at beginning and end of year

Chart 32

Farm Debt as Percentage of Assets

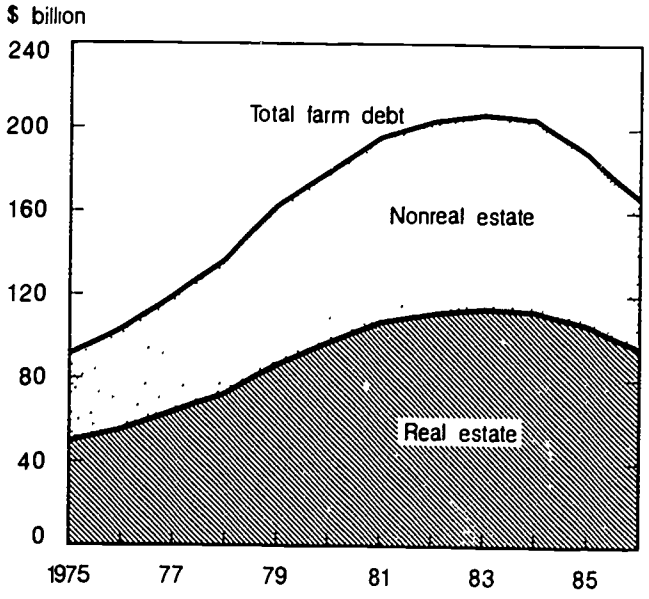


Debt is shown as percentage of real estate debt to real estate assets and percentage of nonreal estate debt to nonreal estate assets Data as of December 31

Assets and Finance

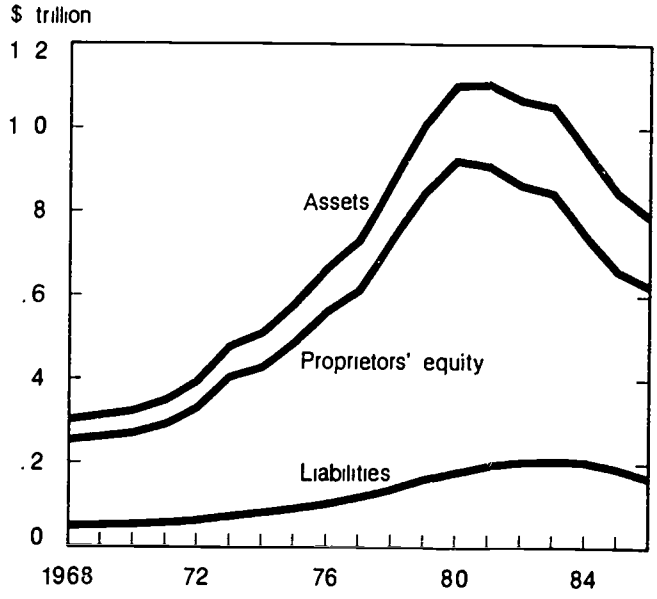
Total farm debt fell $20.6 billion during 1986. The continuing fall in farmland prices drove equity down 32 percent, or $300 billion, from its 1980 peak. Interest rates on farm real estate loans fell in 1986 but real interest rates remain high.

Chart 33
Farm Debt



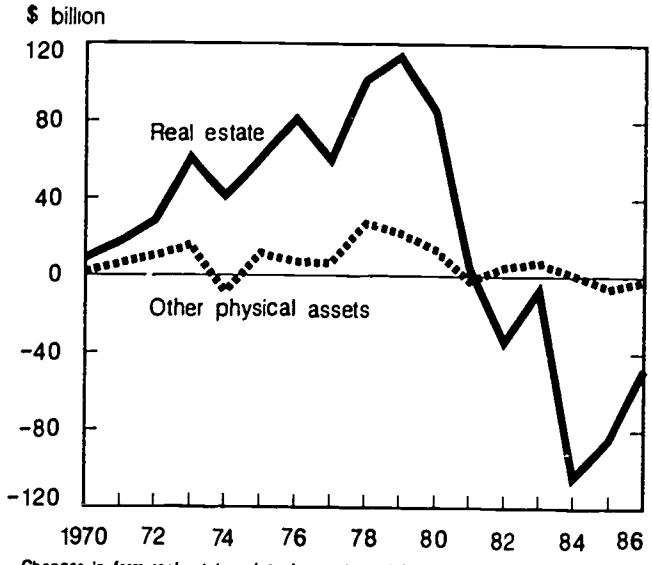
Farm loans outstanding December 31

Chart 34
U.S. Farm Balance Sheet



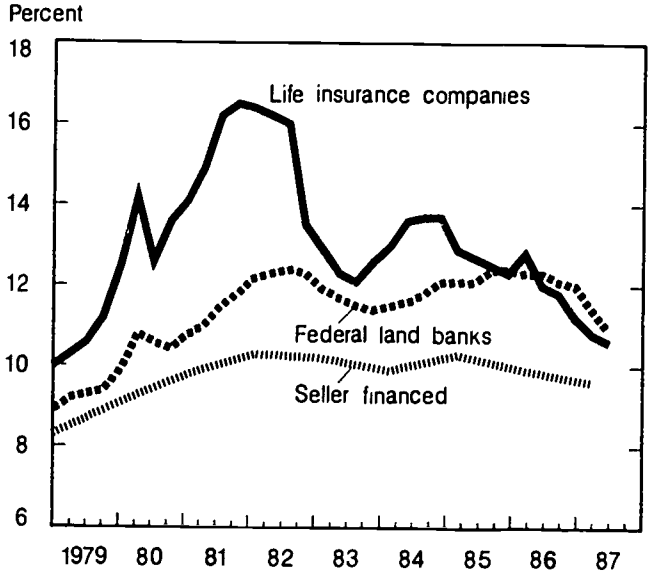
Data as of December 31 Includes farm households

Chart 35
Capital Gains



Changes in farm real estate values less net capital investments, mostly unrealized. Other physical assets include machinery and motor vehicles, livestock and poultry, and crops stored on farms

Chart 36
Interest Rates on Farm Real Estate Loans



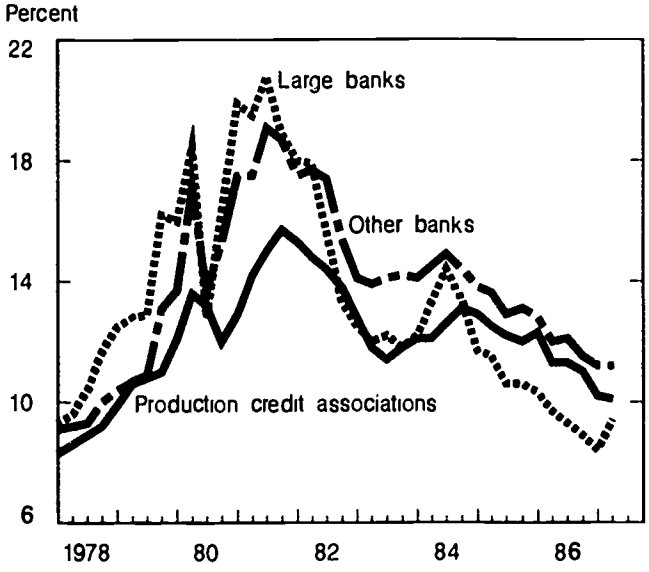
Federal land bank rates exclude new loan fees and charge for the stock borrowers are required to buy

Finance and Inputs

Farm fuel use declined in recent years due to adoption of energy-saving farm production technologies, shift from gas to diesel-powered units, and reduced planted acreage.

Chart 37

Interest Rates on Farm Nonreal Estate Loans



Rates on new PCA loans include service fees. Bank data are from surveys made by the Federal Reserve System.

Chart 38

Farm Fuel Use

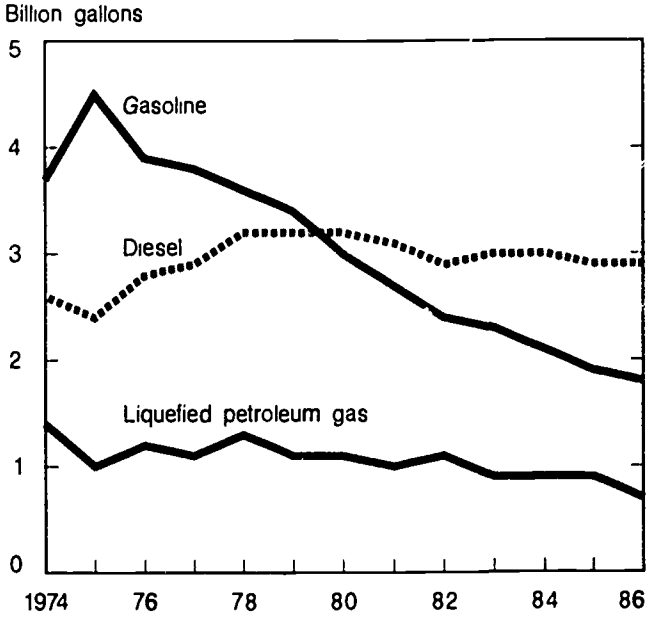
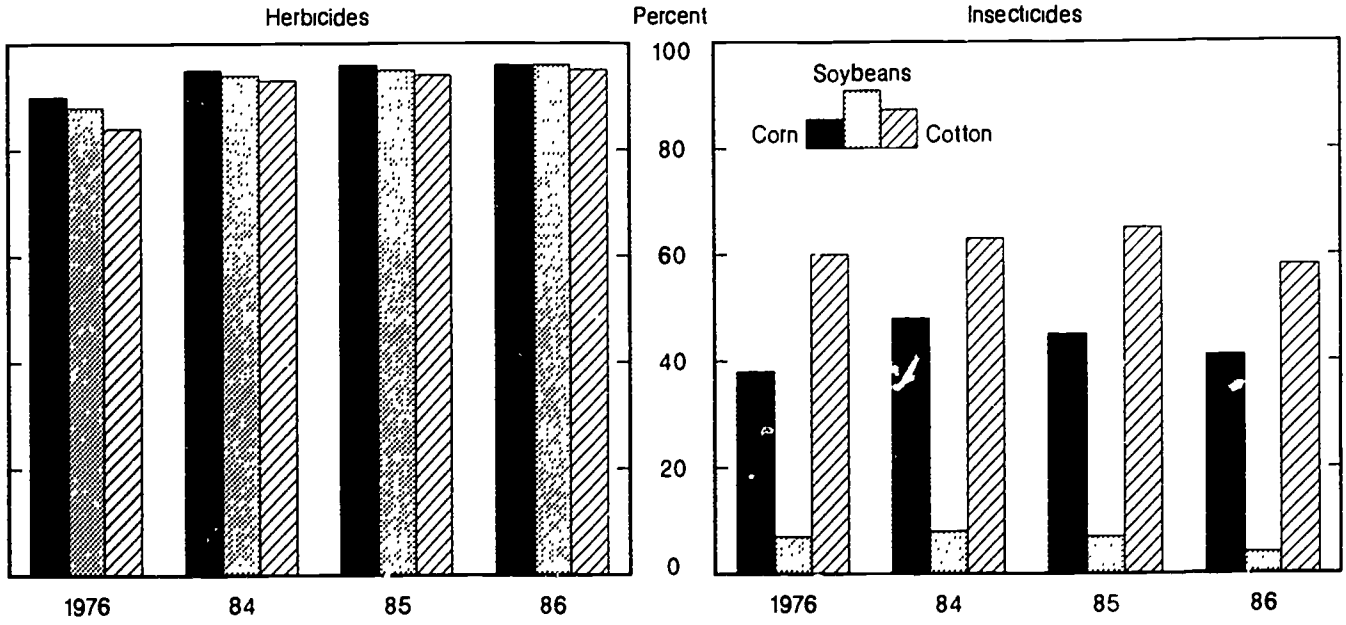


Chart 39

Crop Acres Treated with Pesticides



Inputs

Fertilizer use fell in 1986, reflecting declining crop acreage. Falling total expenditures for farm machinery during the 1980's reflect fewer sales of new tractors. Farm machinery trade balance fell from a $1.4-billion surplus in 1981 to a $165-million deficit in 1986, mostly due to declining exports of large-wheel tractors and increasing imports of small- and midsize wheel tractors.

Chart 40
Farm Fertilizer Use

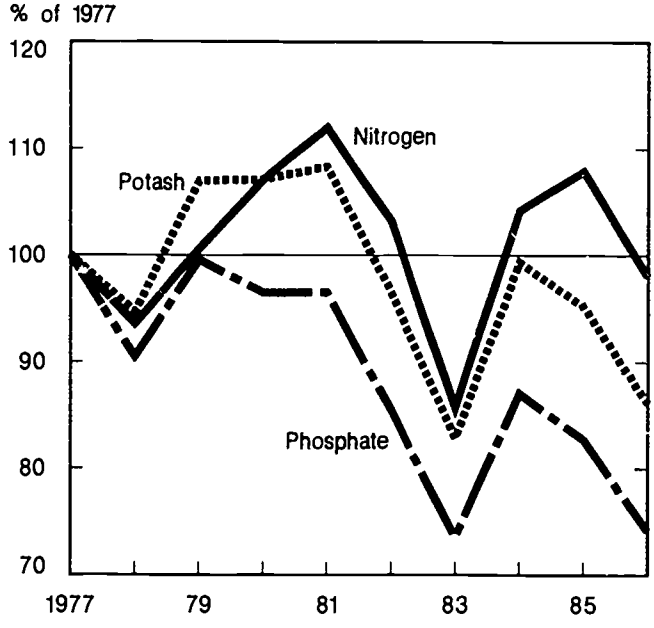


Chart 41
U.S. Farm Machinery Expenditures

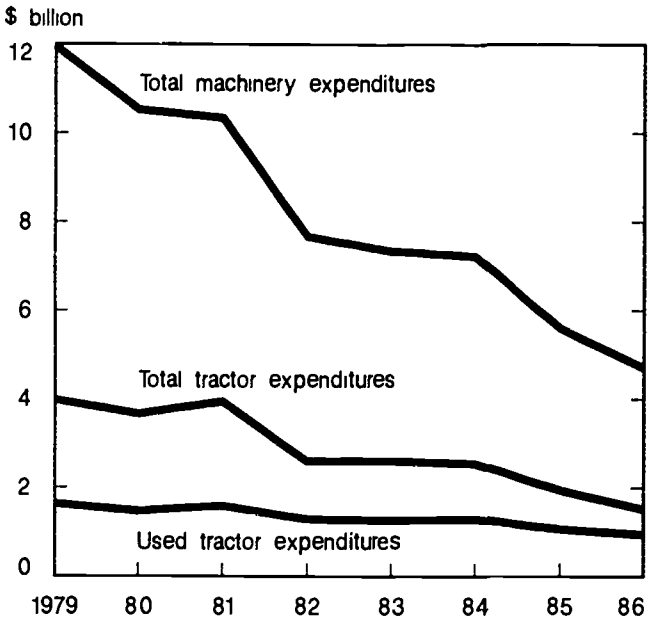
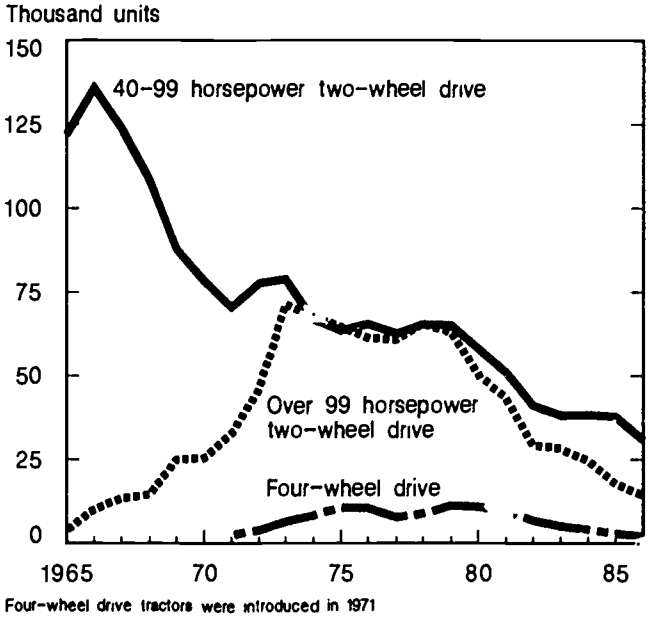
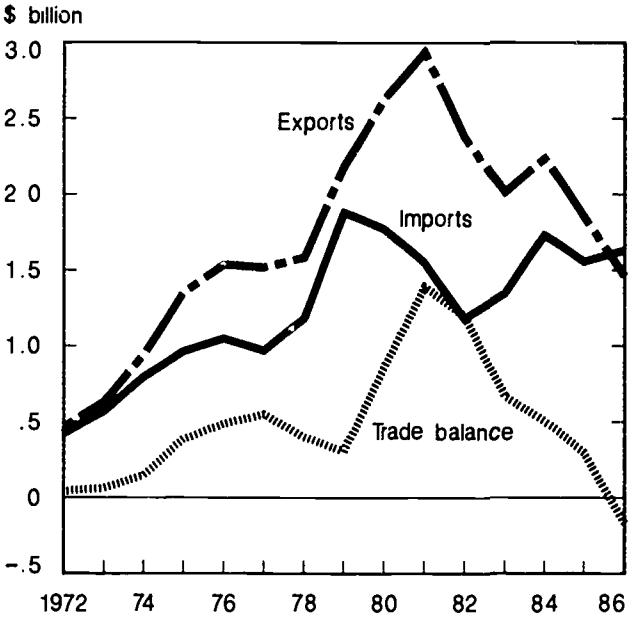


Chart 42
Farm Wheel Tractor Unit Sales



Four-wheel drive tractors were introduced in 1971

Chart 43
U.S. Farm Machinery Trade

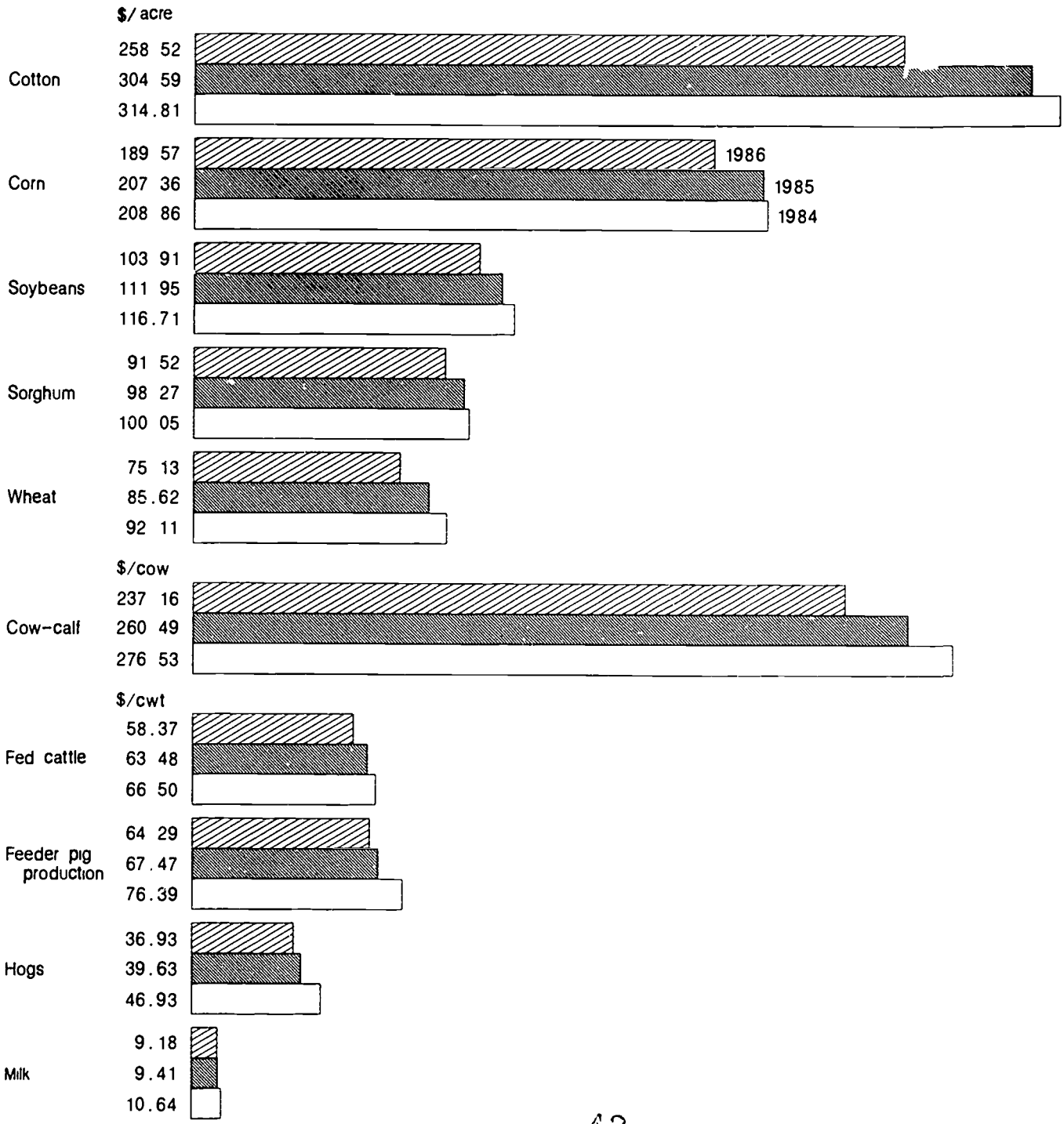


Costs and Returns

Production costs for most crops and livestock fell in 1986. Fuel costs were down the most (19.5 percent), followed by cash interest payments and feed. While input costs fell, so did market prices for most crops and for many livestock products.

Chart 44

Crop and Livestock Production Costs

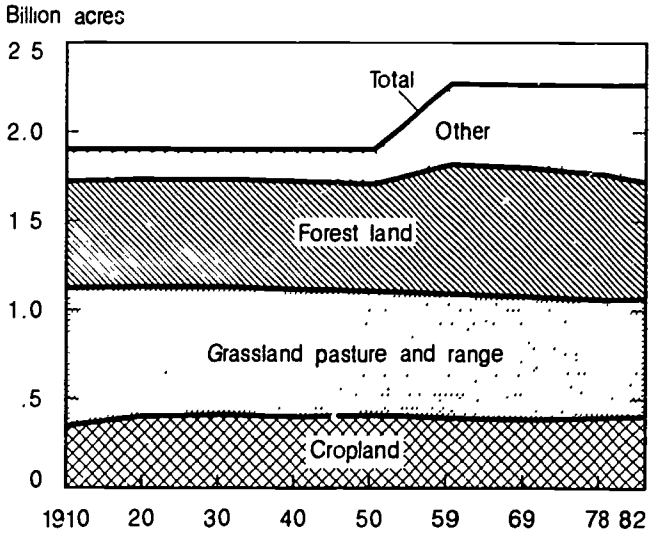


Land Use

Cropland acreage dipped in 1983 under the Government's payment-in-kind (PIK) program, and fell again in 1986-87 as more acres were idled under Government programs. Cropland was concentrated in the Corn Belt and Northern Plains.

Chart 45

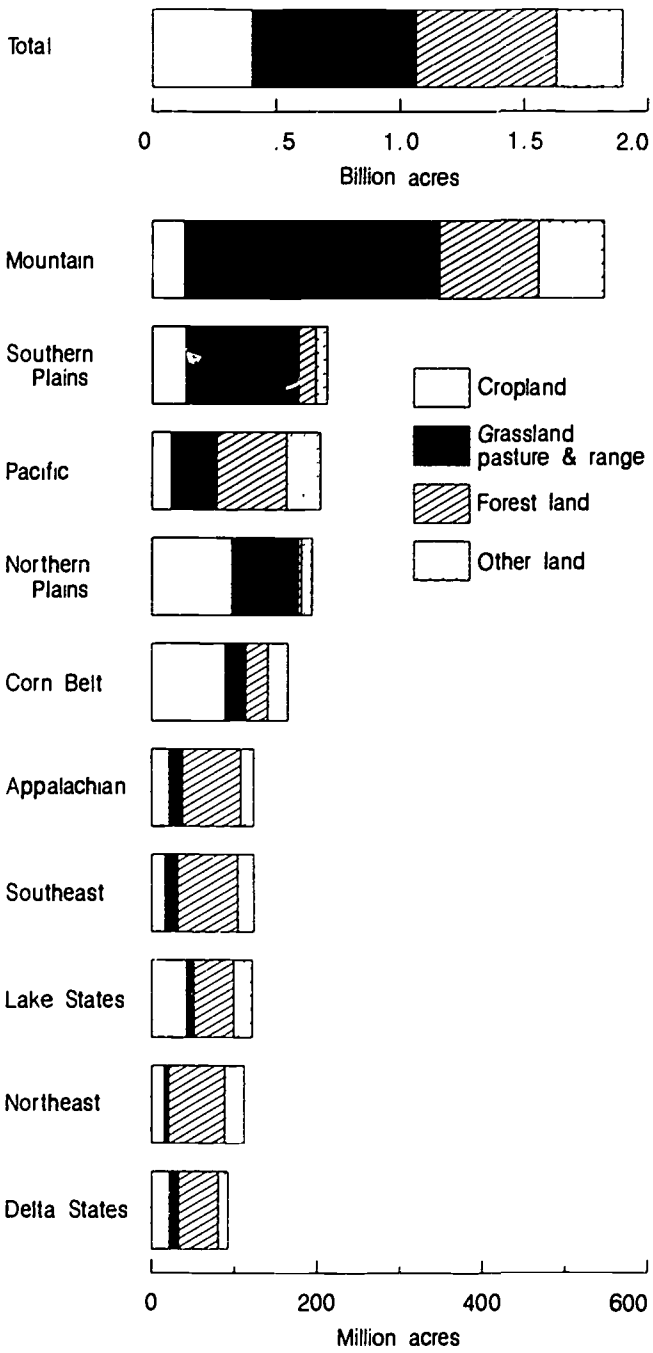
Total U.S. Land Use



Grassland pasture and range includes cropland used only for pasture Forest land excludes that reserved for parks and other special uses Total includes Alaska and Hawaii beginning in 1959 Land uses in 1987 will be developed after the 1987 Census of Agriculture

Chart 46

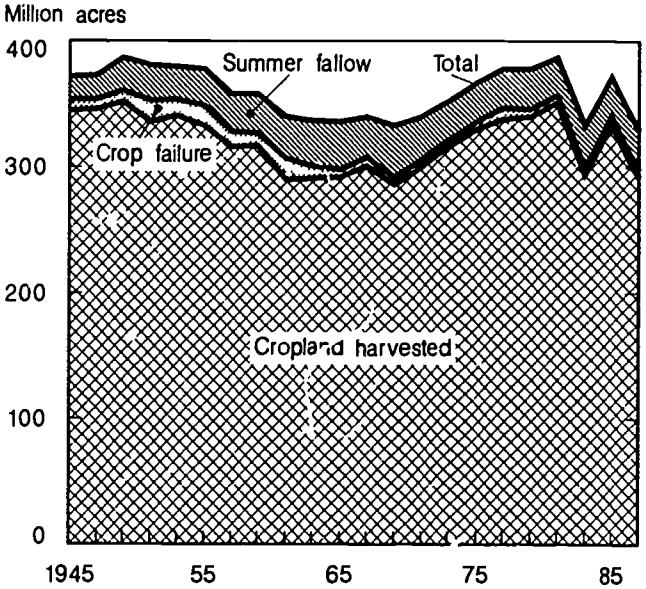
Major Uses of Land by Region



1982 data Grassland pasture and range includes cropland used only for pasture Forest land excludes that reserved for parks and other special uses Total excludes Alaska and Hawaii 1987 data will be developed after the 1987 Census of Agriculture

Chart 47

Cropland Used for Crops



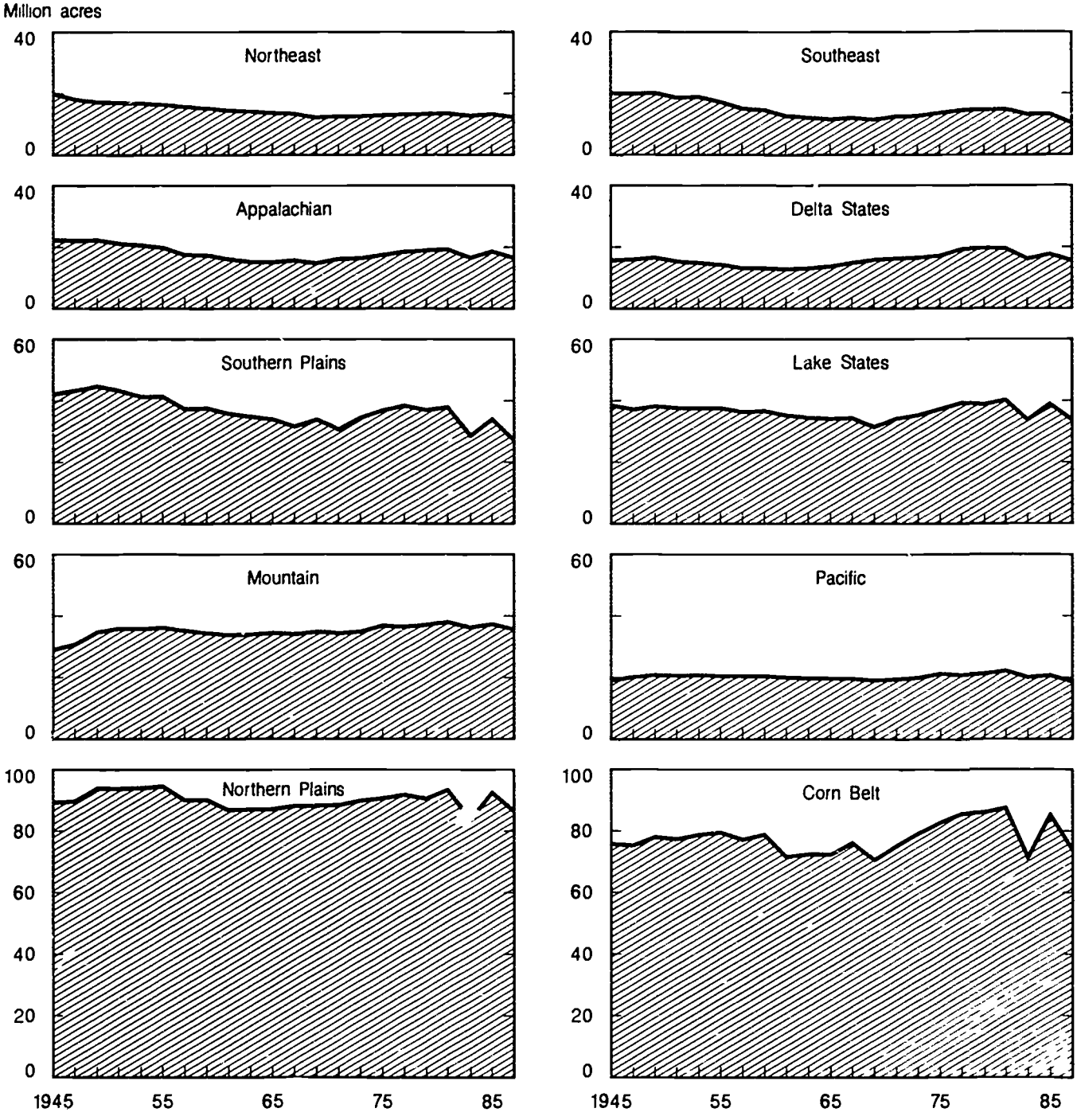
Total excludes cropland used only for pasture and idle cropland

Land Use

Cropped acreage use was down in all regions in 1987. Producers idled an additional 24 million acres of cropland nationwide under Government programs during 1986-87.

Chart 48

Cropland Used for Crops by Region



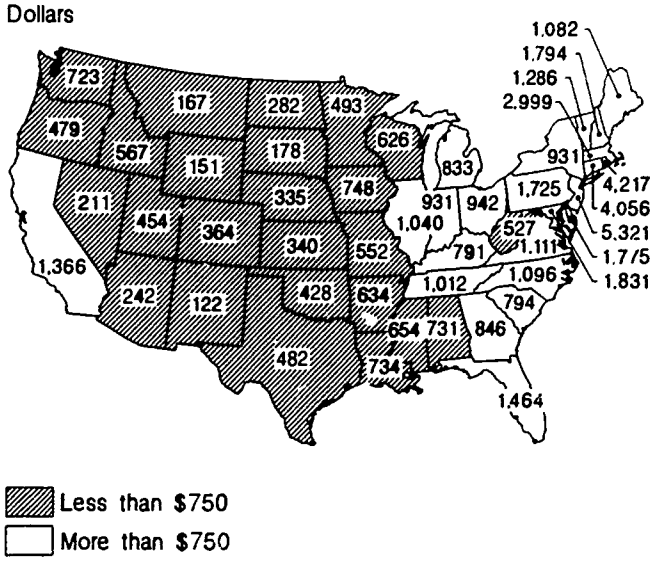
Includes cropland harvested, crop failure, and cultivated summer fallow

Land Values

U.S. farmland values in 1987 ranged from $5,321 per acre in New Jersey to $122 in New Mexico. Changes in land values during 1982-87 ranged from a 67-percent increase in New Jersey to a 61-percent decline in Minnesota. Foreigners owned 12.5 million acres of U.S. agricultural land in 1987, less than 0.6 percent of all U.S. land.

Chart 49

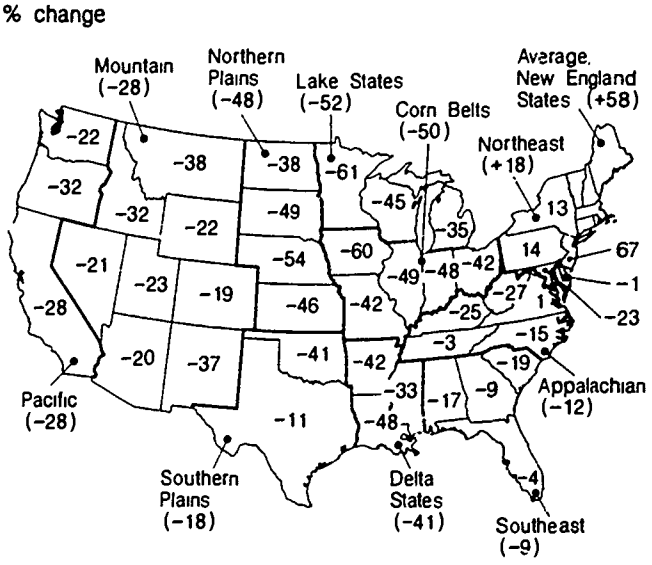
Land Values per Acre



1987 data

Chart 50

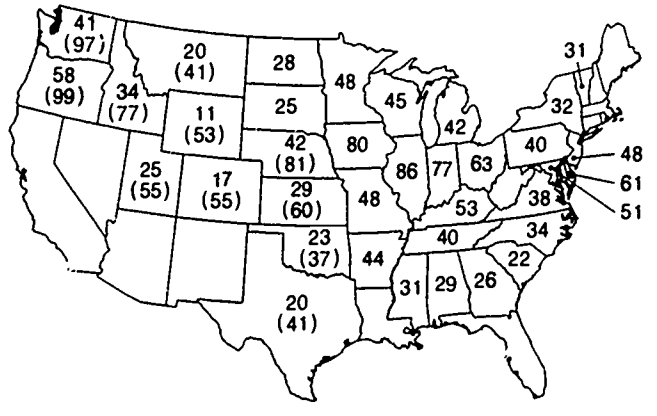
Percentage Change in Land Values, 1982-87



48-State average -33 percent Regional averages in parentheses

Chart 51

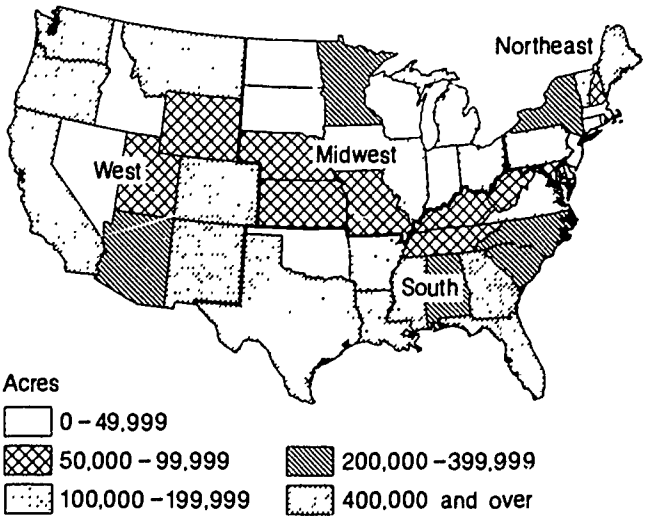
Per Acre Cash Rents for Cropland



1987 data. Data not available for all States Rents for irrigated land in parentheses

Chart 52

Foreign Ownership of Agricultural Land

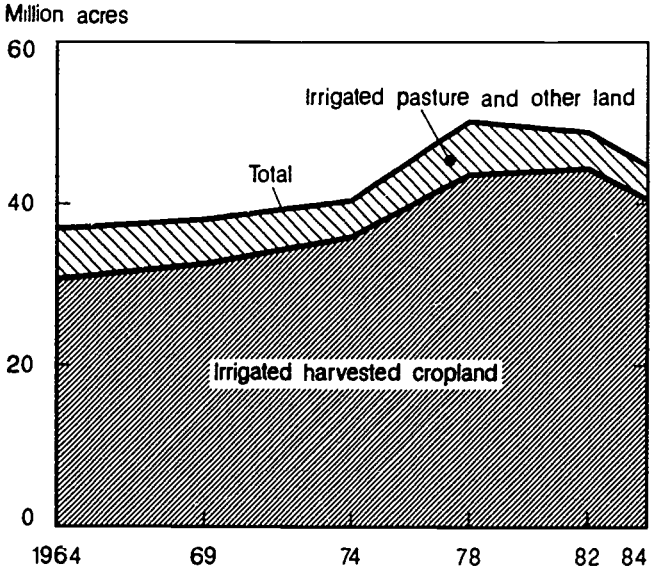


1987 data Alaska, Guam, and Puerto Rico fall in the 0 - 49,999 category Hawaii falls in the 50,000 - 99,999 category

Irrigation

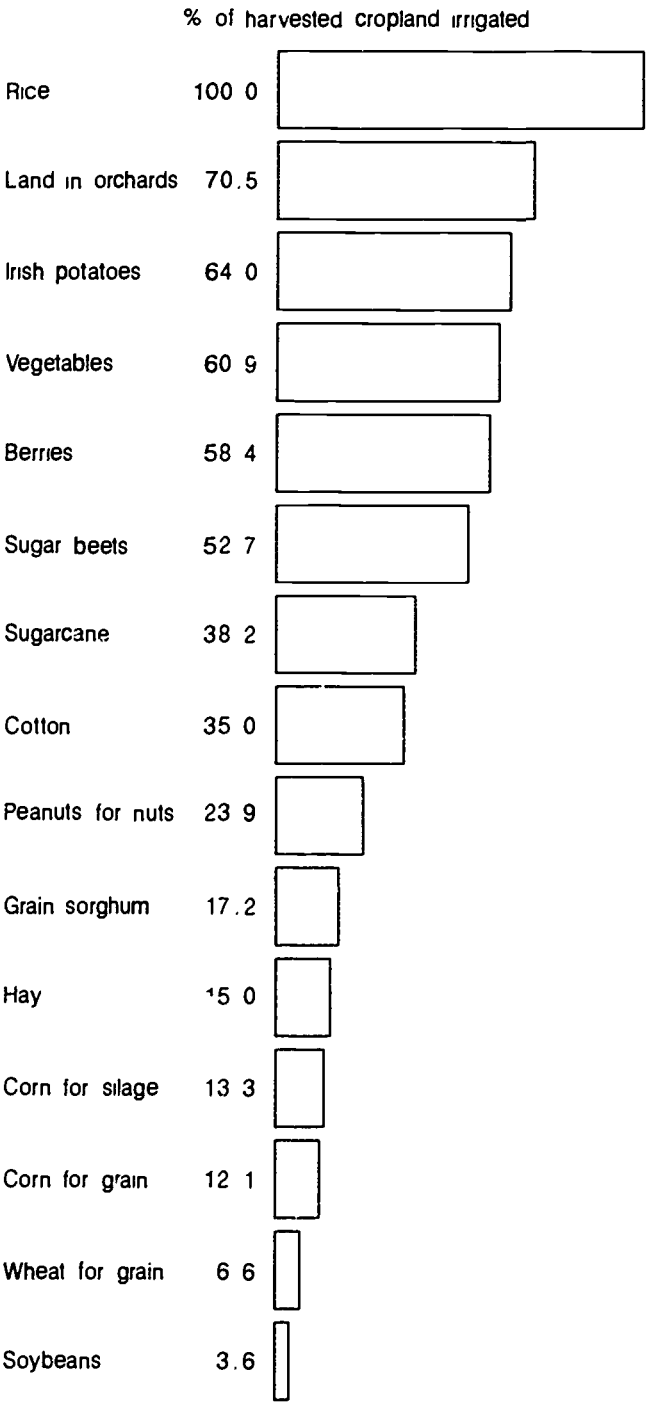
Irrigated land in the conterminous United States fell from 50.2 million acres in 1978 to 44.7 million acres in 1984. Fewer acres irrigated meant that less irrigation water was applied during 1979-84.

Chart 53
Irrigated Farmland



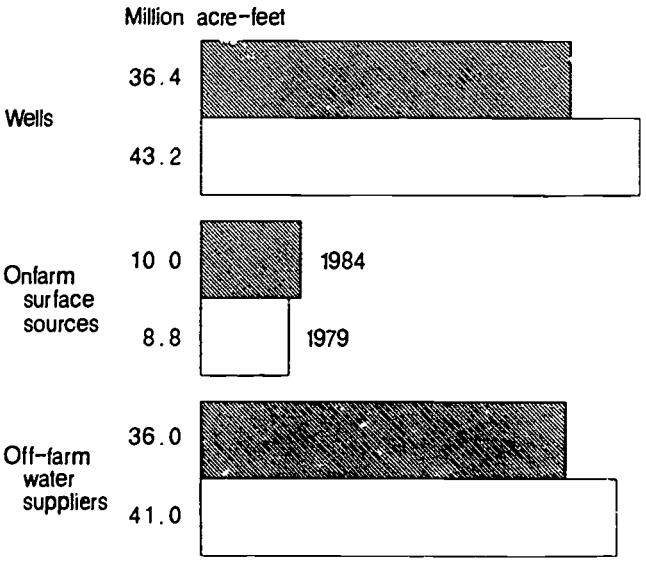
Source Census of Agriculture 1964-82 and the 1984 Farm and Ranch Irrigation Survey

Chart 54
Percentage of Harvested Cropland Irrigated



1982 data Source Census of Agriculture.

Chart 55
Estimated Quantity of Water Applied By Principal Source

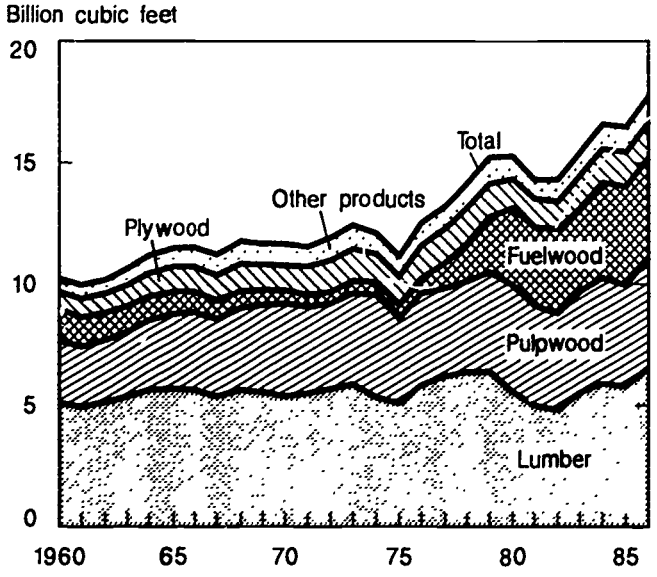


Source. 1979 and 1984 Farm and Ranch Irrigation Surveys

Timber Products

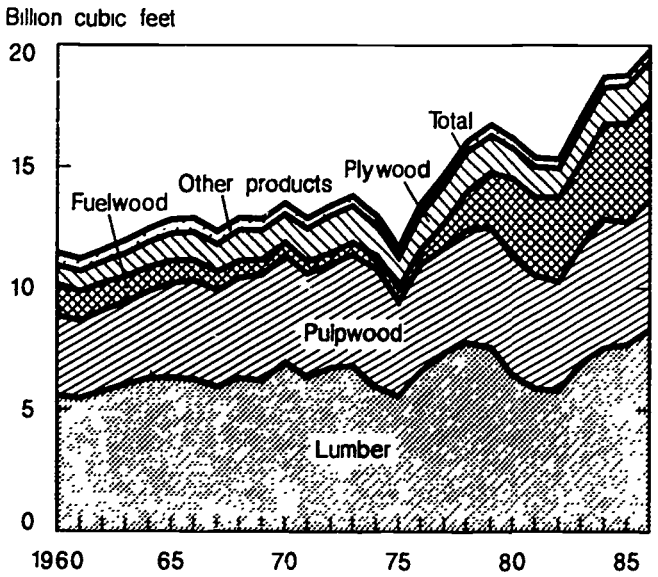
Total U.S. production, consumption, and trade of timber products have all increased steadily over the past 25 years. Fuelwood production and consumption have grown particularly fast since the mid-1970's.

Chart 56
Timber Products Production



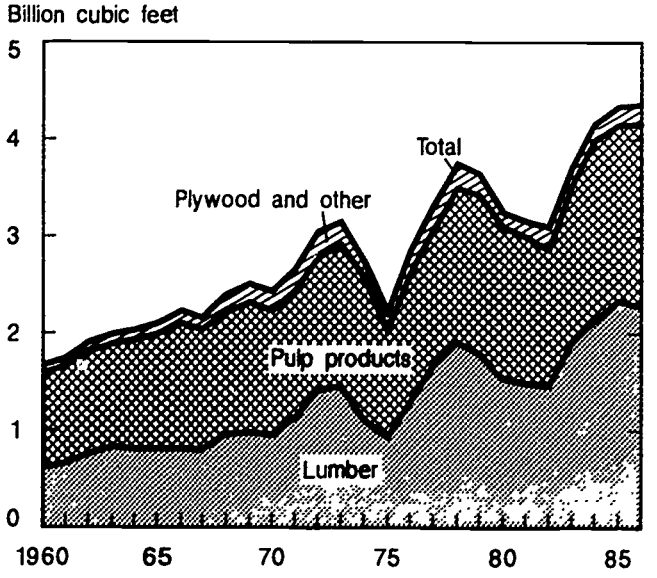
Estimated volume of timber required to produce indicated products
Source: Based on Bureau of the Census data

Chart 57
Timber Products Consumption



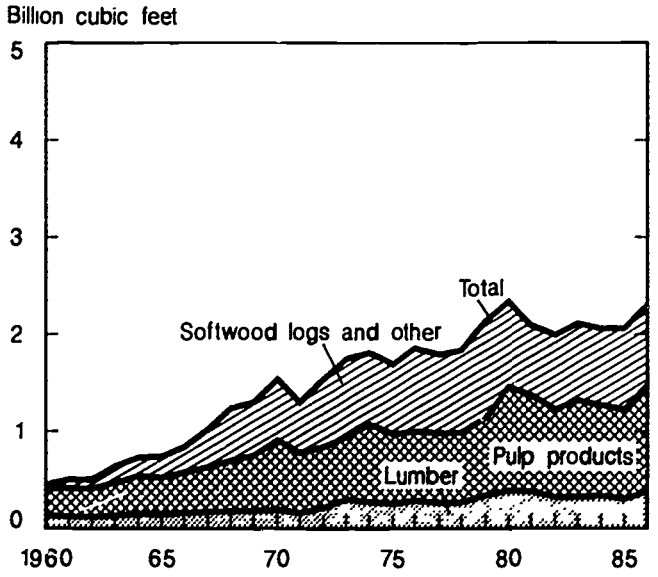
Estimated volume of timber required to produce indicated products
Source: Based on Bureau of the Census data

Chart 58
Timber Products Imports



Estimated volume of timber required to produce indicated products
Source: Based on Bureau of the Census data.

Chart 59
Timber Products Exports



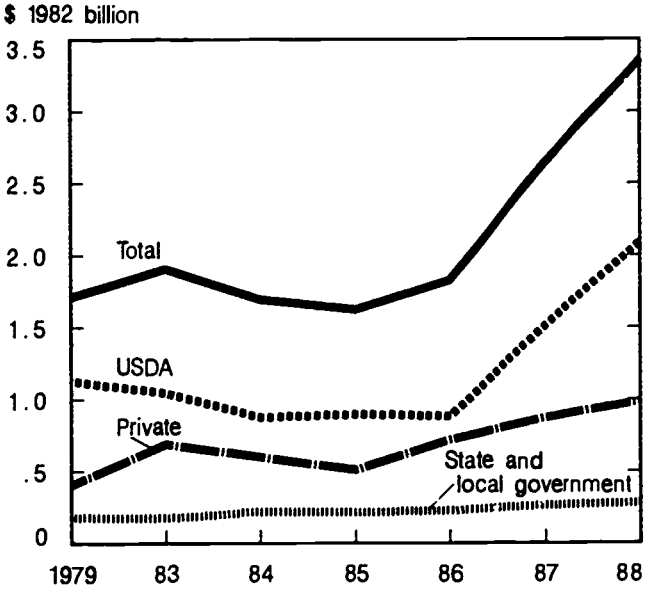
Estimated volume of timber required to produce indicated products
Source: Based on Bureau of the Census data.

Conservation

Conservation tillage is now used on almost a third of U.S. land in crops, with highest use on double-cropped land. Public and private expenditures for conservation rose in 1987, and could rise still more as the Conservation Reserve Program (CRP) expands.

Chart 60

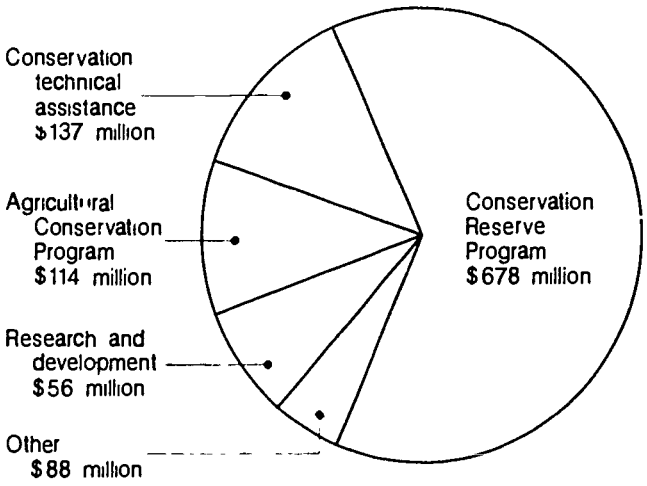
U.S. Land and Water Conservation Expenditures



1988 estimated.

Chart 61

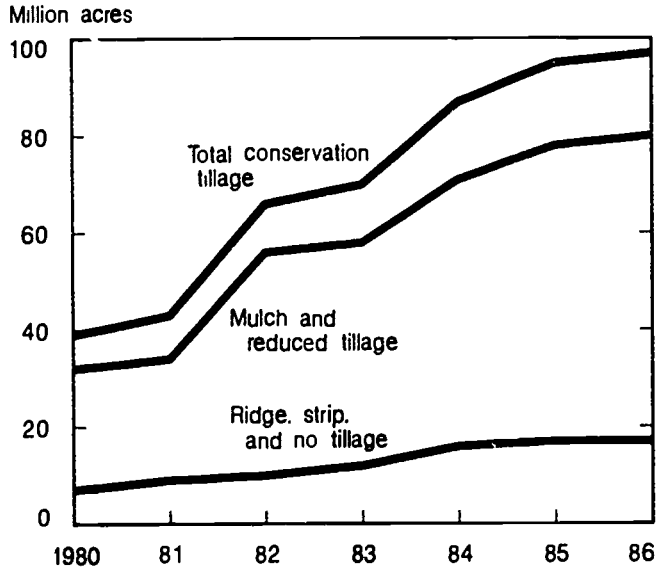
USDA Soil Conservation Programs and Expenditures



1987 data expressed in 1982 dollars. Total expenditure was $1073 million.

Chart 62

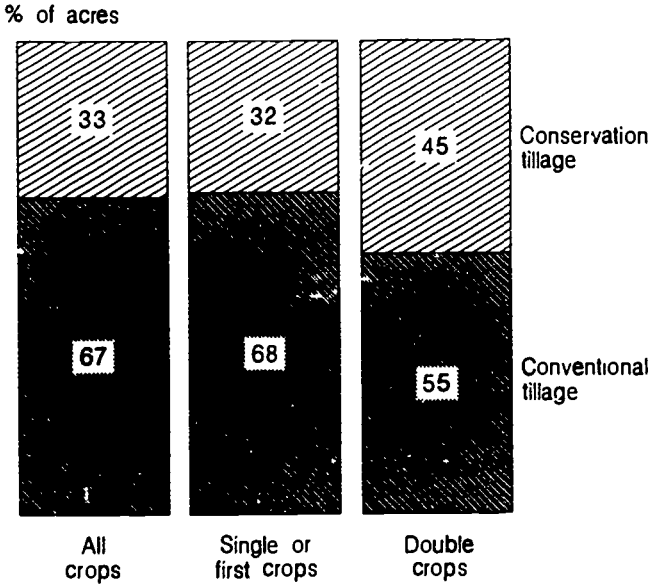
National Use of Conservation Tillage



Data adjusted to reflect changes in definition.
Source: Conservation Tillage Information Center

Chart 63

Tillage Methods Used on Land in Crops



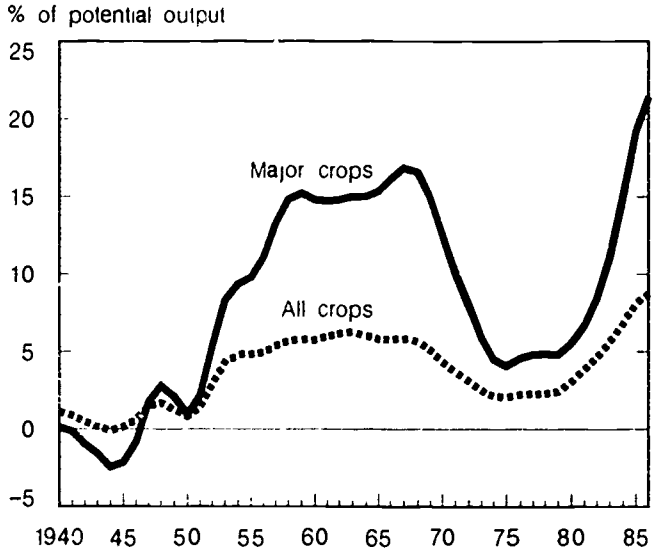
1986 data. Source: Conservation Tillage Information Center

Conservation

About 101 million acres of U.S. cropland were eligible for the Conservation Reserve Program (CRP) in 1987. Over 22 million acres were enrolled in 1986 and 1987. Average annual rental payments on CRP land varied from $36 to $77 for the 48 conterminous States, with a national average of $50 per acre.

Chart 64

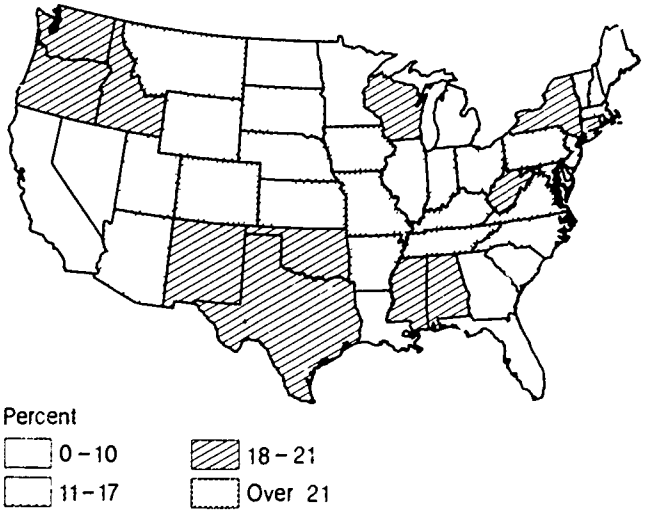
Excess Production Capacity of U.S. Agriculture



Percentages calculated as 7-year moving averages. Major crops include wheat, feedgrains, soybeans and cotton. Excess production capacity is the difference between potential output and commercial demand at prevailing farm prices.

Chart 65

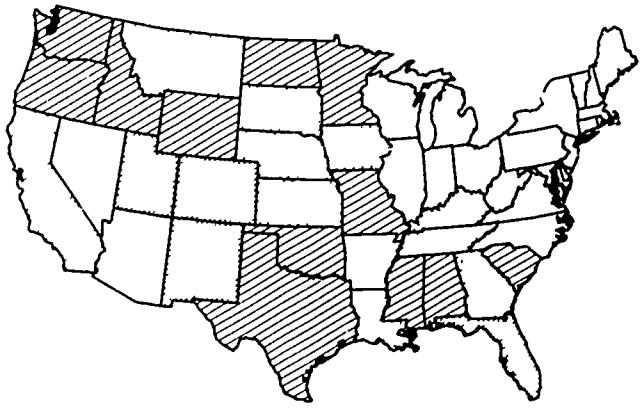
Acreage Eligible for the Conservation Reserve Program as a Percentage of Total Cropland by State



1987 data

Chart 66

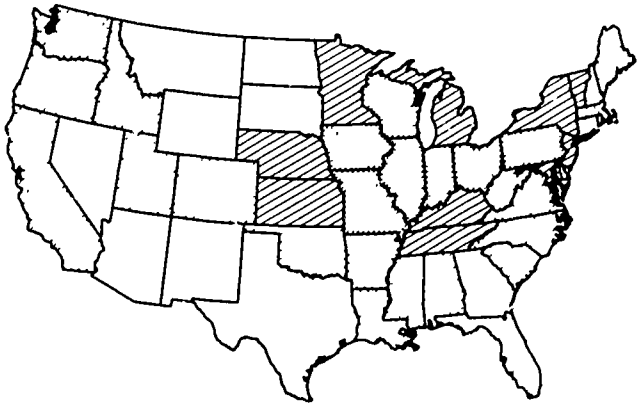
Conservation Reserve Acreage as a Percentage of Eligible Cropland



1987 data

Chart 67

Average Annual per Acre Rental Payment of Conservation Reserve Lands by State



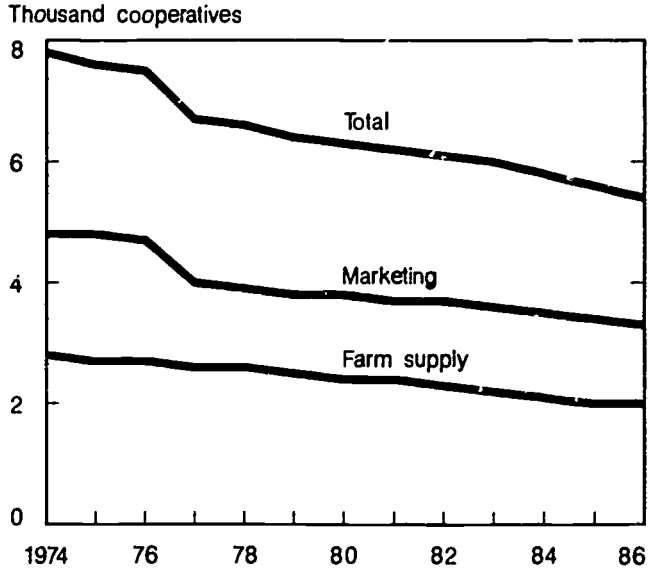
1987 data

Farmer Cooperatives

Both business volume and number of memberships and organizations of U.S farmer cooperatives declined during 1986. The value of farm products marketed and supplies handled dropped 12.2 and 9.3 percent, respectively.

Chart 68

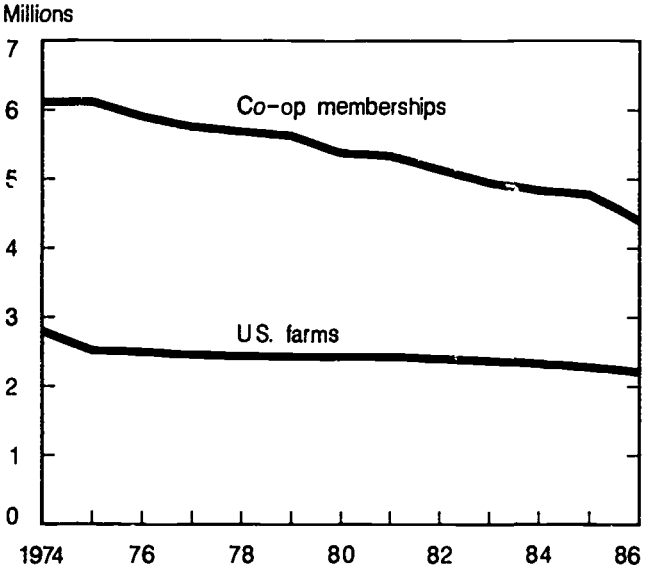
Farmer Cooperatives in the United States



Total includes a small number of cooperatives that provide specialized related services

Chart 69

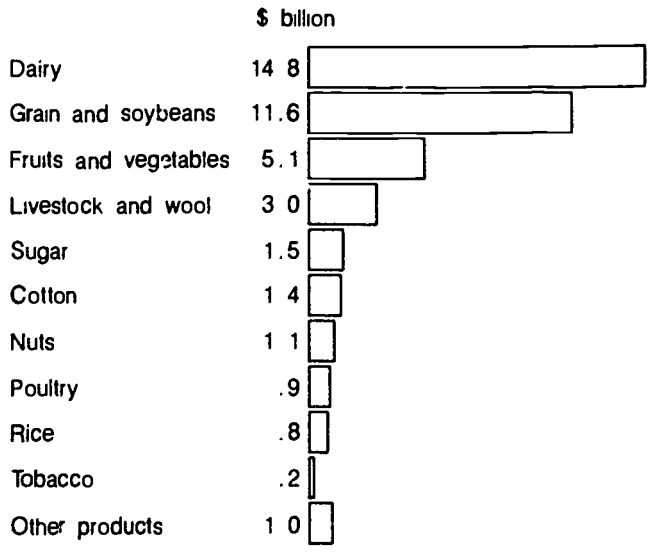
U.S. Farms and Farmer Cooperative Memberships



Memberships include duplication that cannot be eliminated using current reporting methods

Chart 70

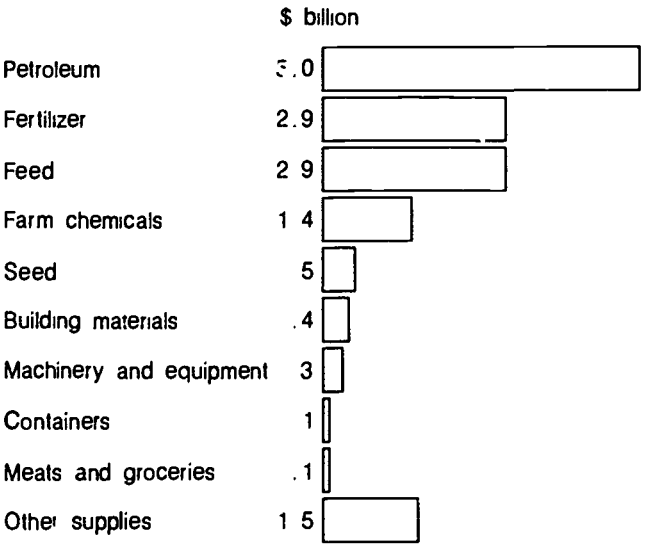
Farm Products Marketed by Farmer Cooperatives



1986 data Total net marketing business = $415 billion Total may not add due to rounding. Other products include dry beans and peas

Chart 71

Farm Supplies Handled by Farmer Cooperatives

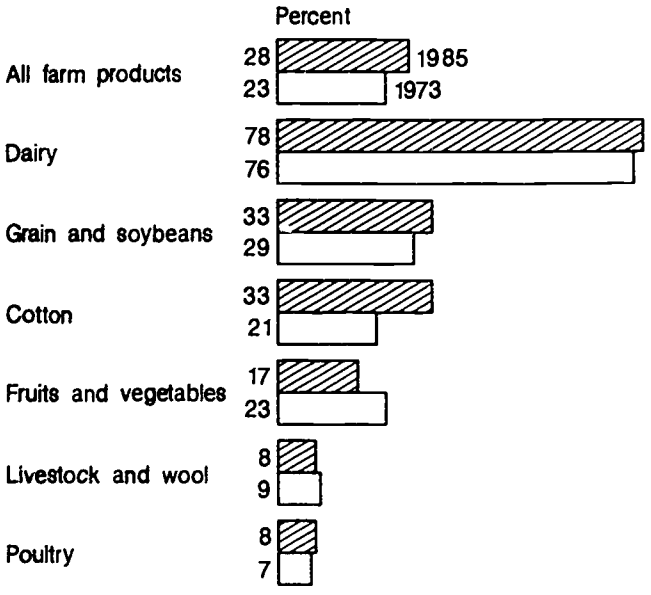


1986 data Total net farm supply business = $151 billion Total may not add due to rounding

Farmer Cooperatives

Cooperatives accounted for about 28 percent of farm products marketed at the first-handler level in 1985. Farmers purchased 26 percent of their major farm supplies through cooperatives. Cooperatives' assets fell 4.6 percent and net income dropped 11.3 percent from 1985.

Chart 72
Cooperatives' Share of Marketing Activity



First-handler level.

Chart 73
Cooperatives' Share of Purchasing Activity

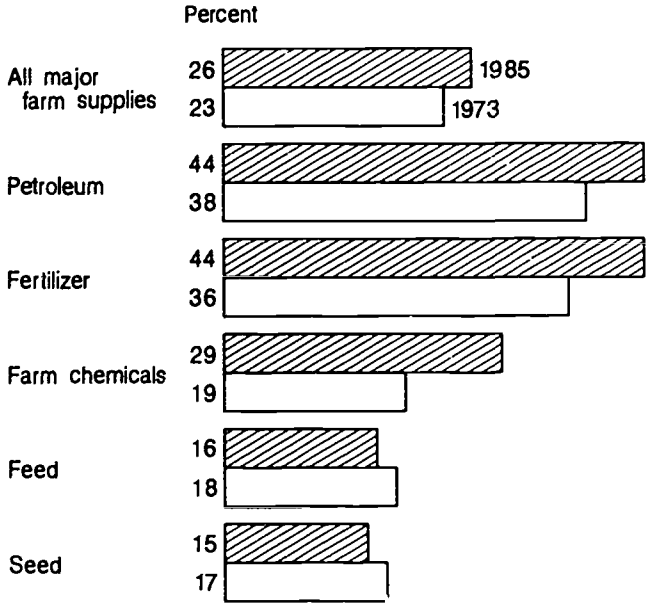
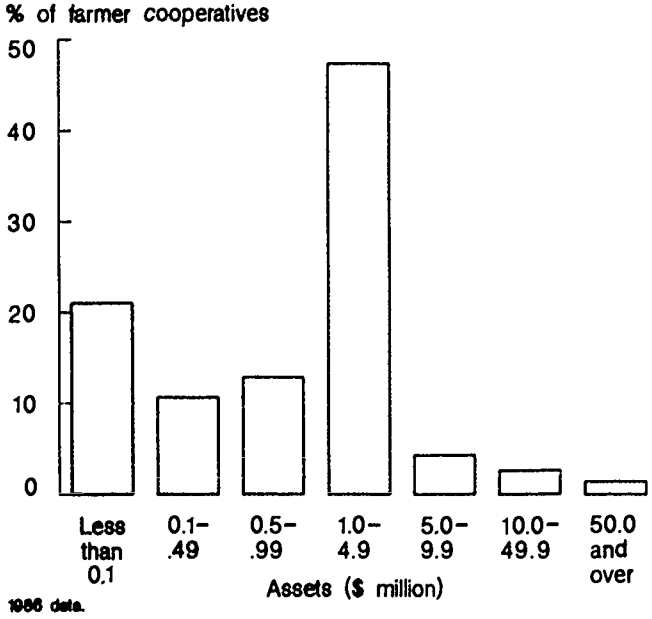
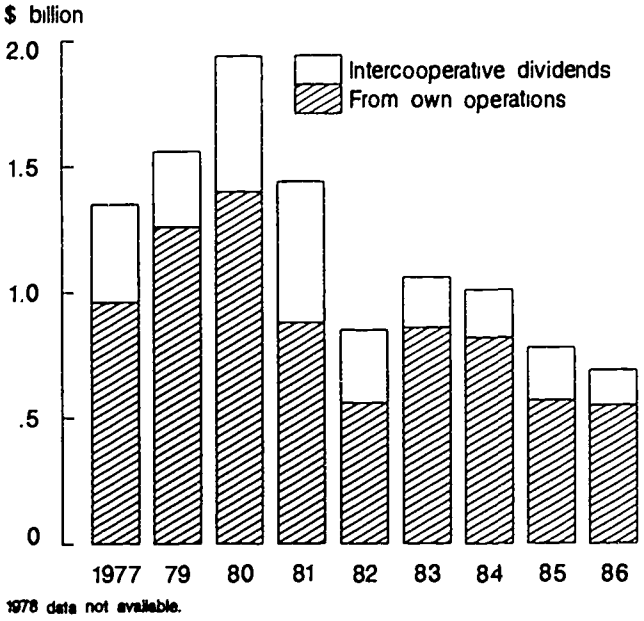


Chart 74
Distribution of Farmer Cooperatives by Size of Assets



1986 data.

Chart 75
Net Income of Farmer Cooperatives



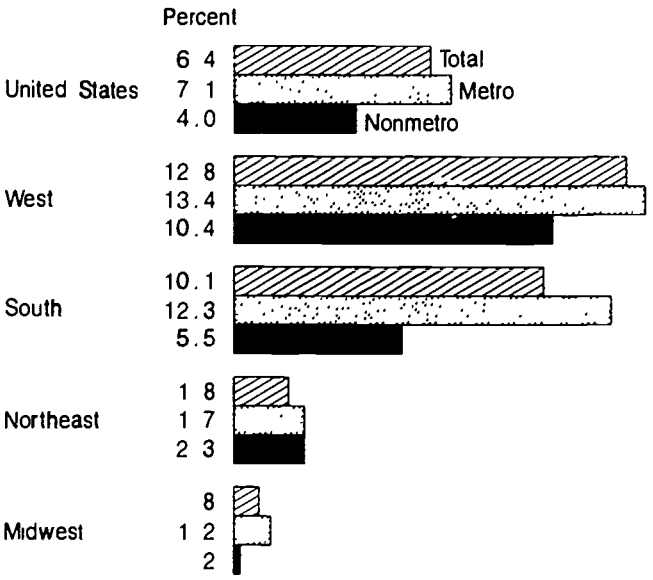
1978 data not available.

Population

The population of nearly 1,000 nonmetro counties fell during 1980-86, reflecting the poor state of their economies. Nonmetro growth was below metro growth rates in three of four regions. Many people moved into rural and small towns of California, Florida, and Texas.

Chart 76

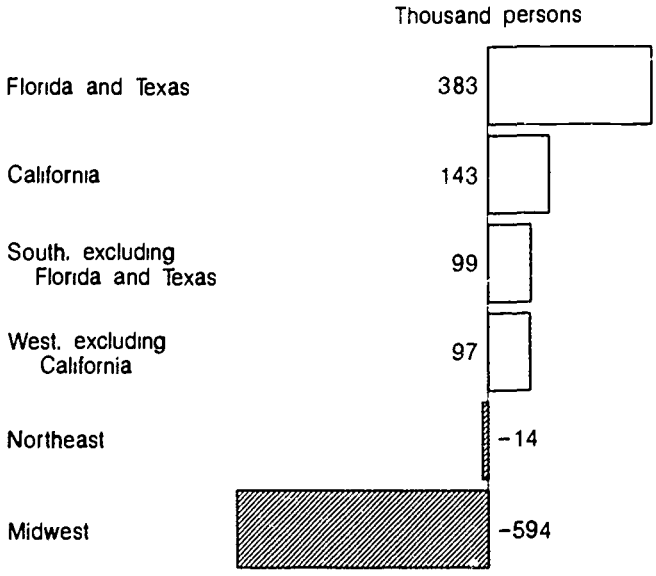
Regional Population Growth, 1980-86



West and US totals include Alaska and Hawaii Source Bureau of the Census

Chart 77

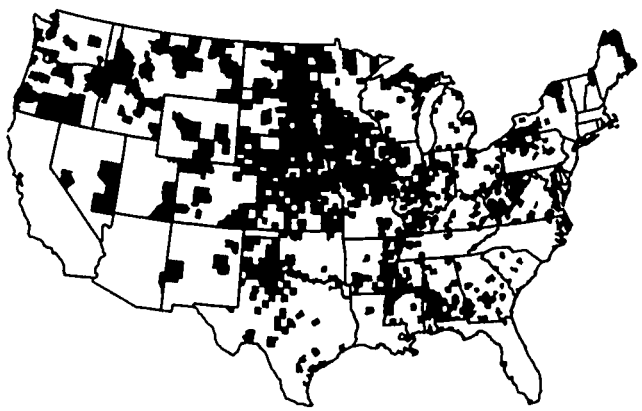
Net Nonmetro Migration, 1980-86



Source Bureau of the Census

Chart 78

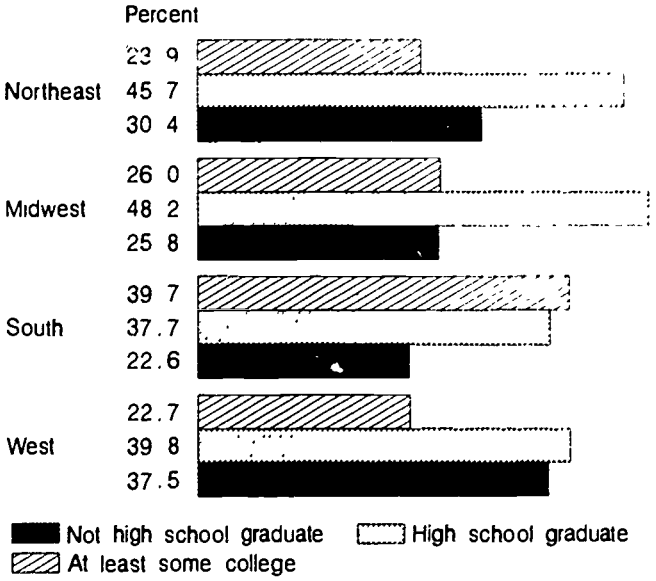
Nonmetro Counties with Population Decline, 1980-86



Source Bureau of the Census

Chart 79

Educational Level of Nonmetro Adults

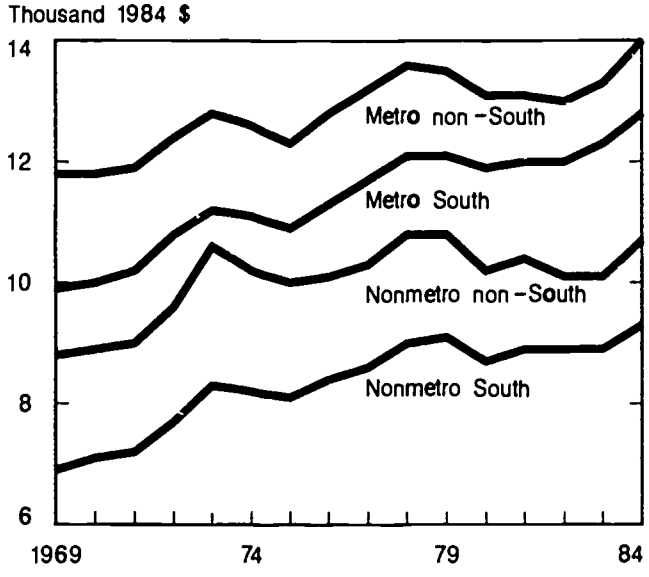


1986 data Source Bureau of the Census

Income

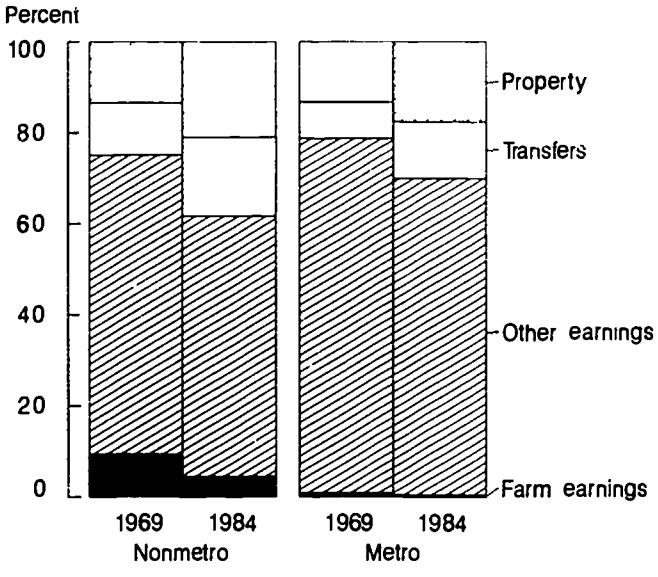
Metro residents outside the South have higher income than nonmetro and southern residents. Transfers grew faster than earnings during 1969-84. Social security, medicare, and other retirement/disability payments account for over 75 percent of government transfers.

Chart 80
Trends in Per Capita Income



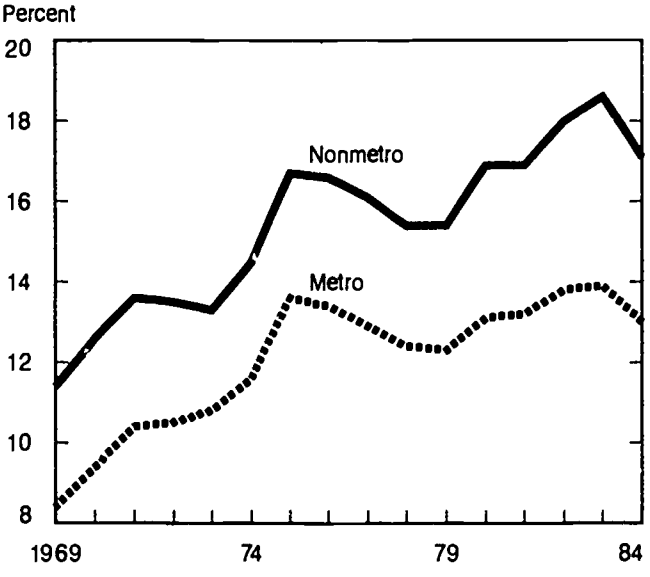
Source: Local Area Personal Income, US Department of Commerce, Bureau of Economic Analysis

Chart 81
Personal Income by Source



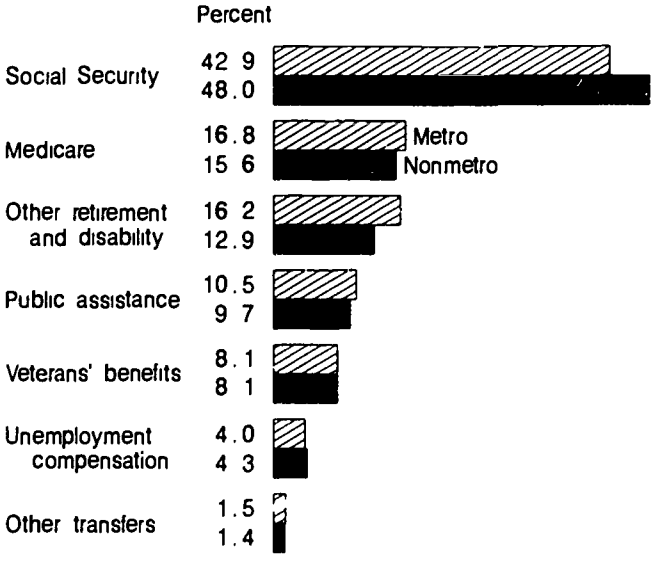
Source: Local Area Personal Income, US Department of Commerce, Bureau of Economic Analysis

Chart 82
Transfer Payments as Percentage of Total Personal Income



Source: Local Area Personal Income, US Department of Commerce, Bureau of Economic Analysis

Chart 83
Government Transfer Payments to Individuals

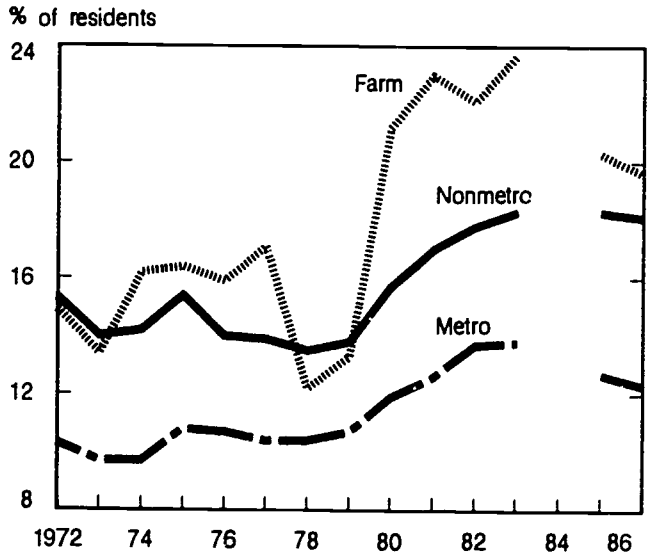


1984 data. Source: Local Area Personal Income, US Department of Commerce, Bureau of Economic Analysis

Poverty

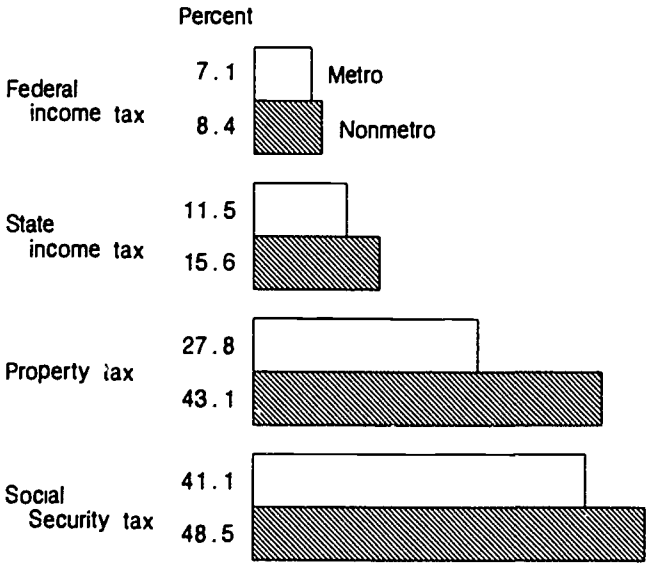
The poverty rate is higher in nonmetro than metro areas, and is particularly high on farms. Poverty began to decline slightly by 1986 after increasing dramatically during 1979-83. The nonmetro poor are more likely to pay taxes than are the metro poor.

Chart 84
Poverty Rates



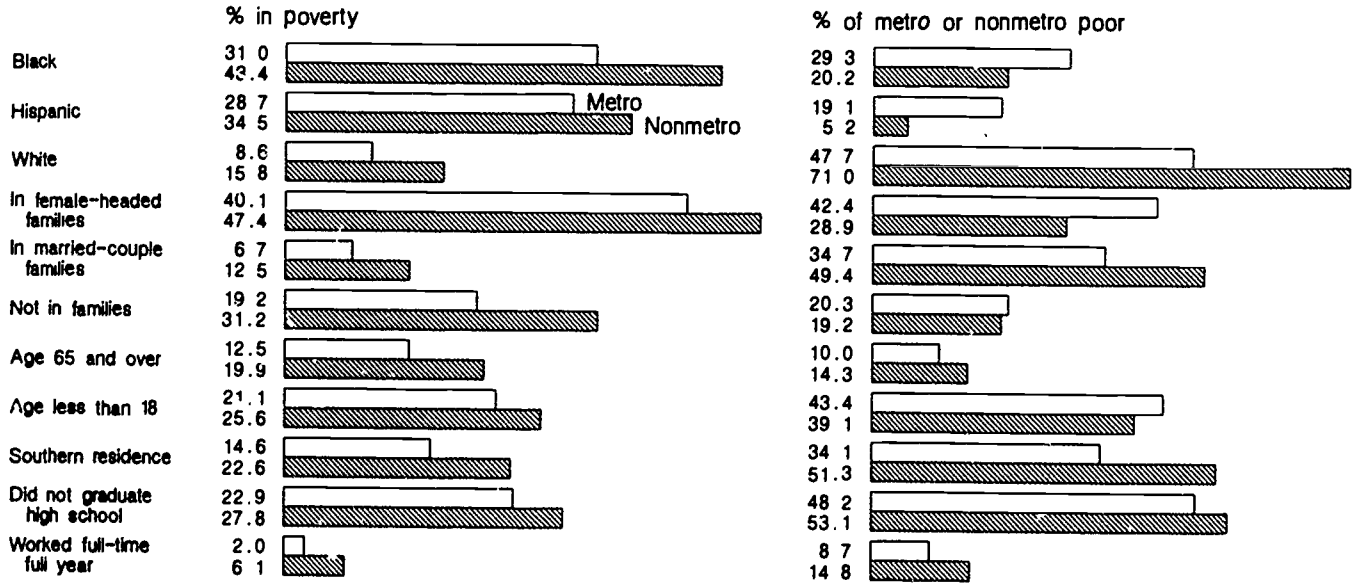
The farm poverty rate is proportion of all residents living on farms who are poor Data for 1984 not available Source: Current Population Survey, Bureau of the Census.

Chart 85
Percentage of Poor Households Paying Selected Taxes



1983 data Source Current Population Survey, Bureau of the Census

Chart 86
Poverty Rates and Characteristics of Persons in Poverty

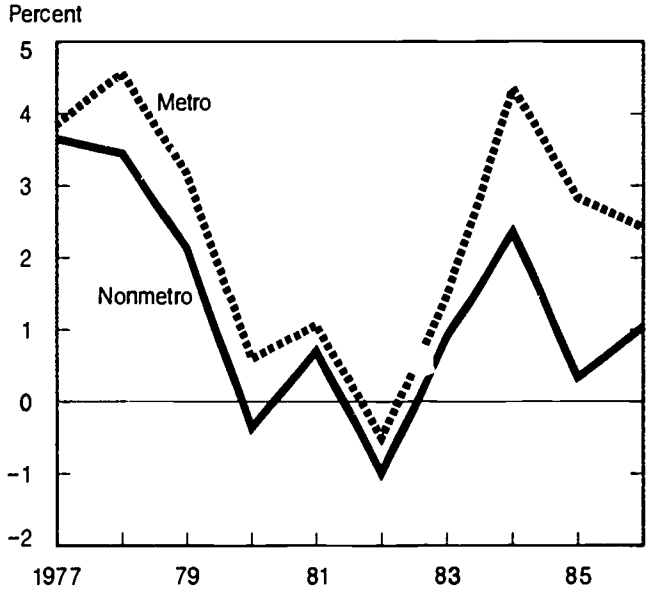


1986 data. Source: Current Population Survey, Bureau of the Census

Employment

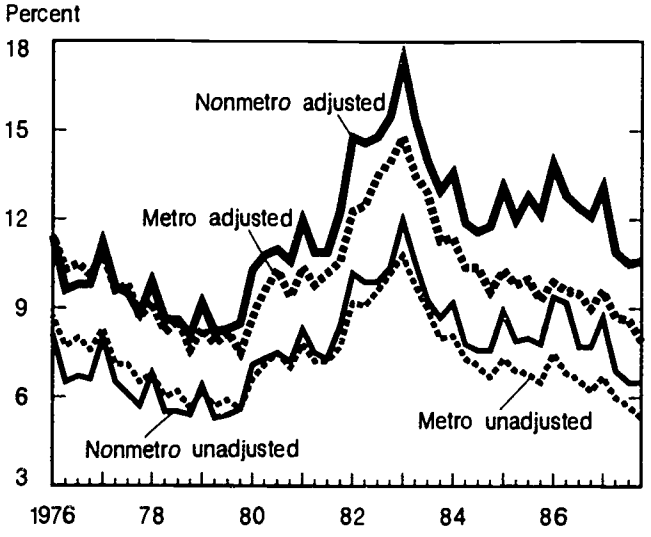
Nonmetro economies outside the Northeast had lower growth and higher unemployment than metro areas during 1984-86. These areas have not fully recovered from the early 1980's recession. The 1987 unemployment data suggest conditions could be improving.

Chart 87
Employment Change from Previous Year



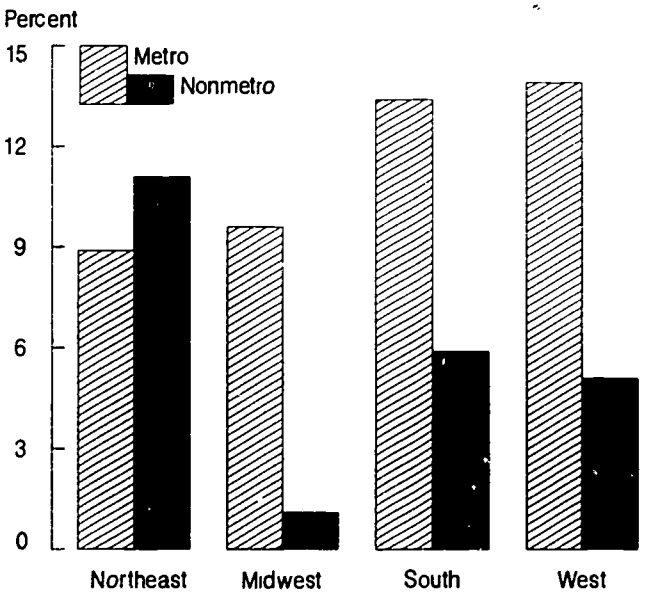
Source Bureau of Labor Statistics

Chart 88
Unemployment Rates for Metro and Nonmetro Areas



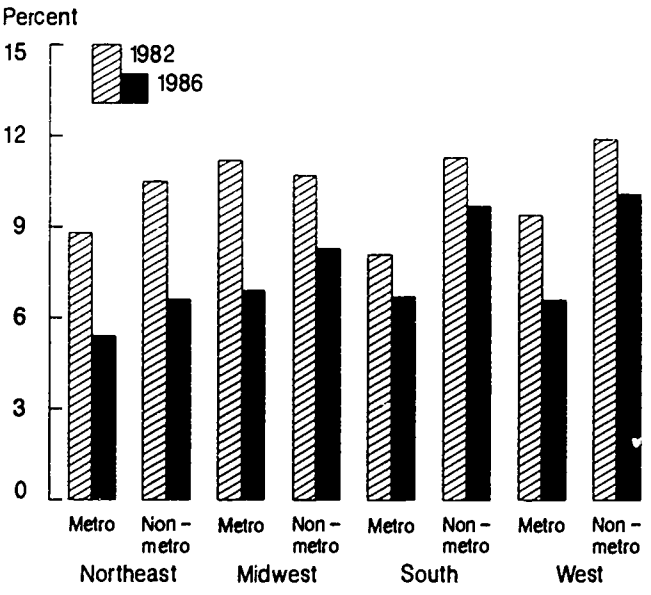
Adjusted unemployment includes those unemployed, those not looking for work because jobs are unavailable, and half those working part-time because full time jobs are unavailable. Beginning third quarter 1985, CPS metro/nonmetro definition based on 1980 Census. Source: Current Population Survey

Chart 89
Employment Growth by Region, 1982-86



Source Bureau of Labor Statistics

Chart 90
Unemployment by Region

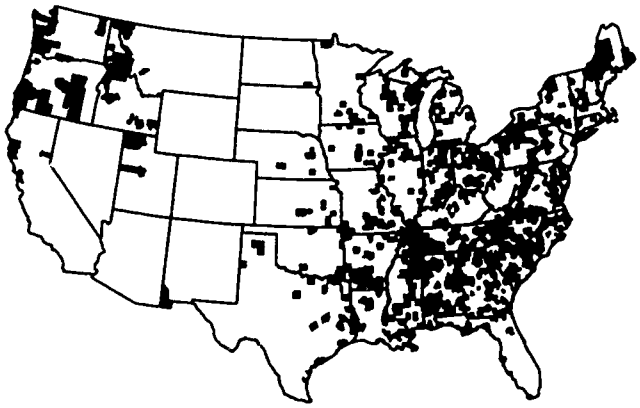


Source Bureau of Labor Statistics

Employment

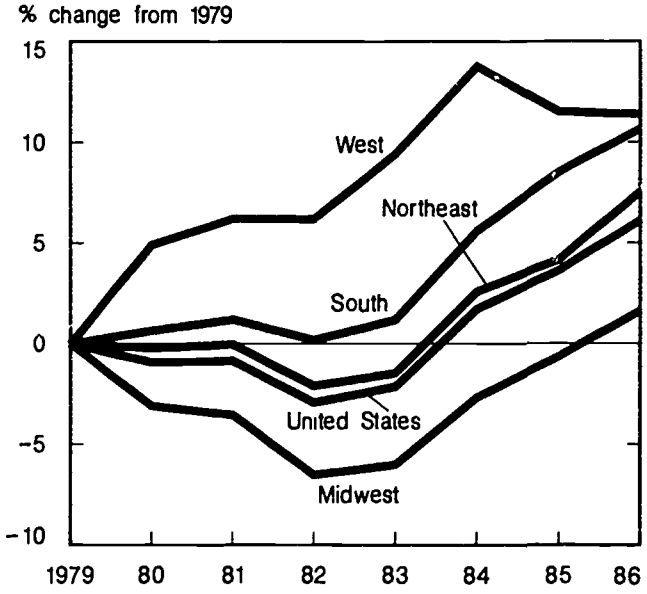
Employment in nonmetro manufacturing-dependent counties in the Midwest fell during 1979-82, then recovered. The increase there from 1979-86, however, was small compared with employment increases in the South and West. Retirement-dependent counties saw rapid increases in employment everywhere but the Midwest.

Chart 91
Manufacturing-Dependent Counties



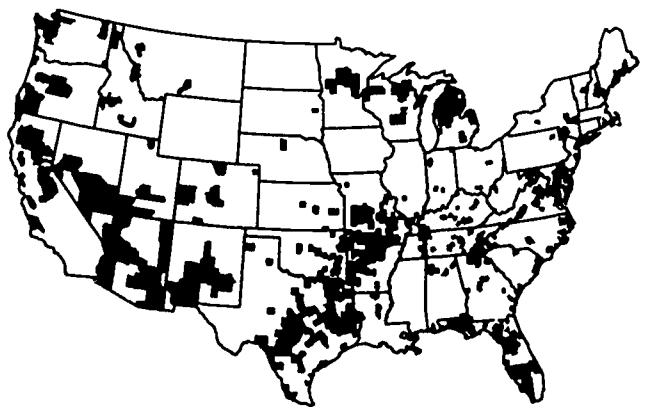
Manufacturing counties are those where manufacturing contributed 30 percent or more of total labor and proprietor income in 1979

Chart 92
Employment Change in Nonmetro Manufacturing-Dependent Counties



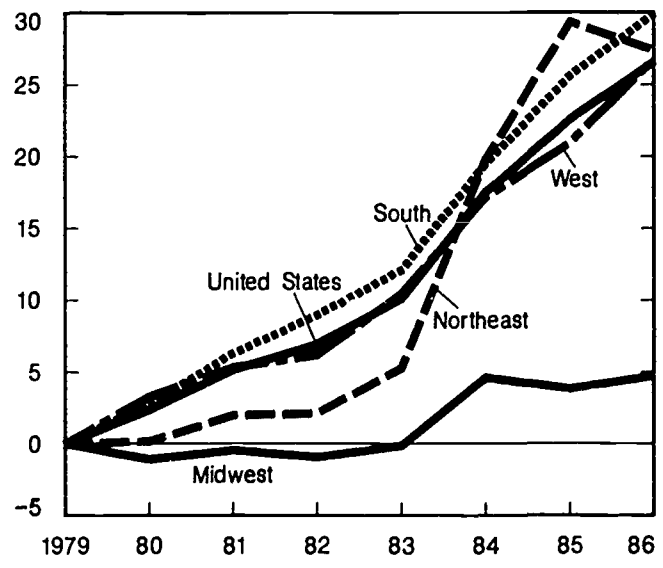
Source Bureau of Labor Statistics

Chart 93
Retirement-Dependent Counties



Retirement counties are those with 15 percent or more net immigration of cohorts age 60 and over, 1970-80

Chart 94
Employment Change in Nonmetro Retirement-Dependent Counties

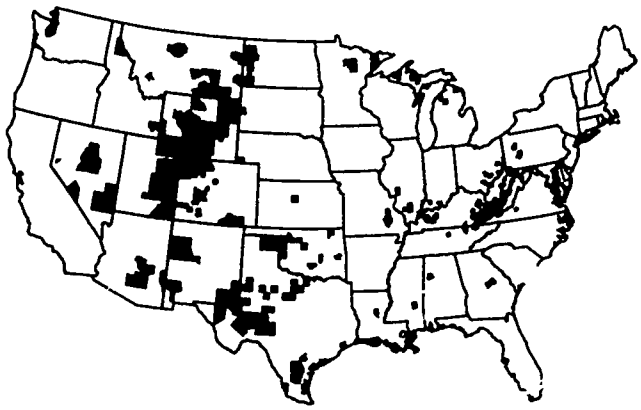


Source Bureau of Labor Statistics

Employment

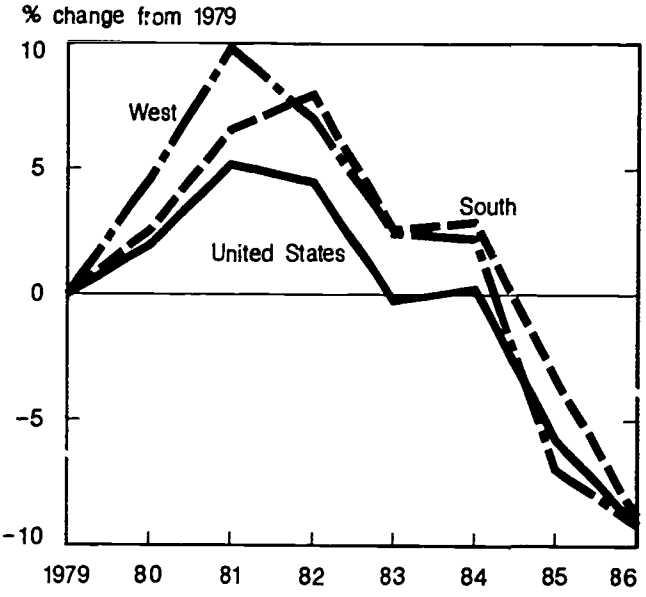
Nonmetro mining-dependent counties saw employment rise after 1979, but suffered dramatic losses during 1982-83 and 1984-86. Employment rose in nonmetro farming-dependent counties in the South and West during 1979-86, but fell in the Midwest.

Chart 95
Mining-Dependent Counties



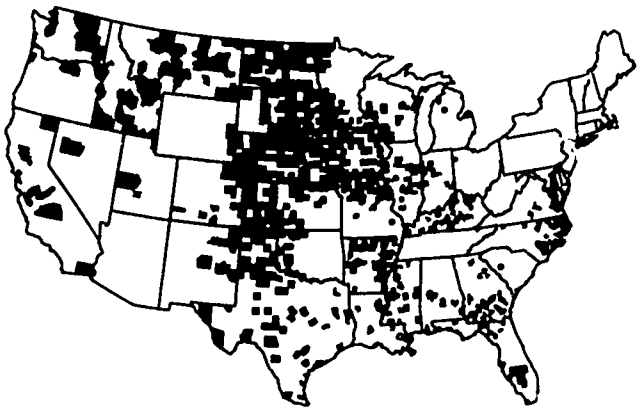
Mining-dependent counties are those where mining income equaled 20 percent or more of total labor and proprietor income in 1979

Chart 96
Employment Change in Nonmetro Mining-Dependent Counties



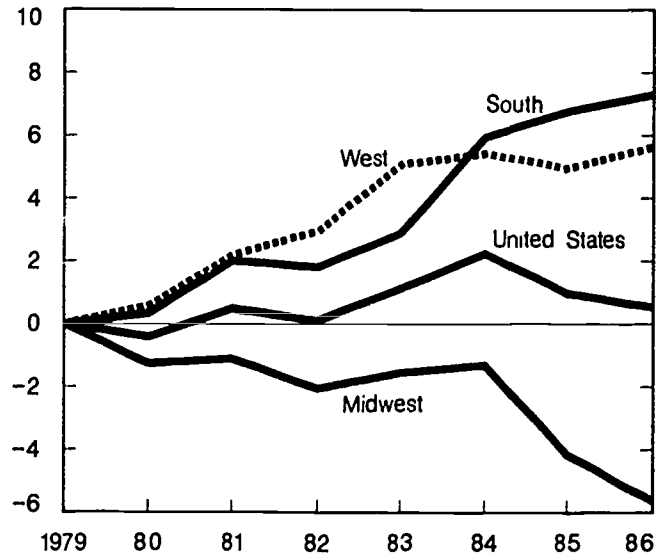
Source Bureau of Labor Statistics

Chart 97
Farming-Dependent Counties



Farming-dependent counties are those where farming contributed a weighted annual average of 20 percent or more to total labor and proprietor income, 1975-79

Chart 98
Employment Change in Nonmetro Farming-Dependent Counties



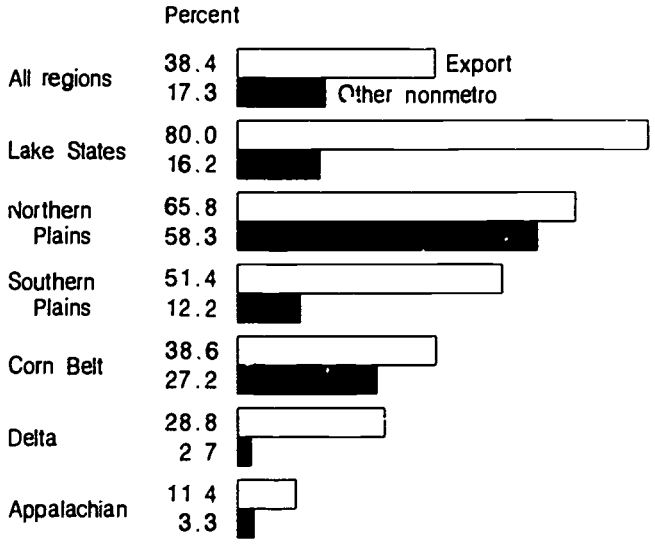
Source Bureau of Labor Statistics

Employment

The 419 counties most affected by foreign trade in farm commodities are located primarily in the Corn Belt, Delta, and Great Plains. Population, income, and employment growth in export-dependent counties have generally lagged that of other rural areas. Export-dependent counties fell further behind after farm exports fell sharply in the early 1980's.

Chart 99

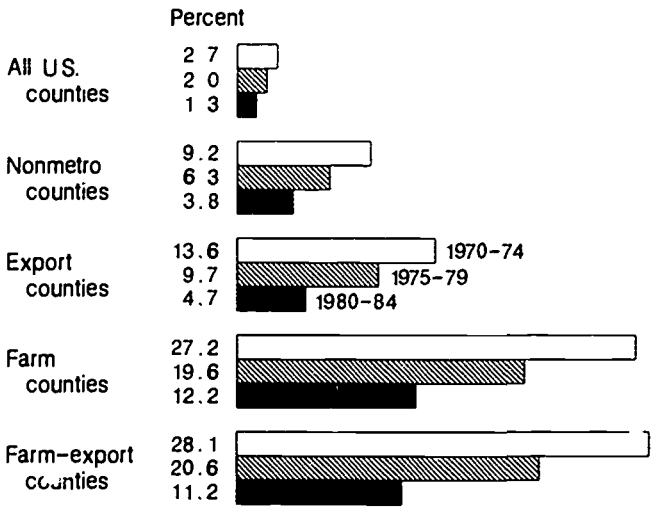
Proportion of Nonmetro Counties Losing Population, 1970-85



Export counties are those with 50 percent or more of total farm sales from corn, wheat, soybeans, cotton, and rice in 1982 Source US Department of Commerce Bureau of the Census

Chart 100

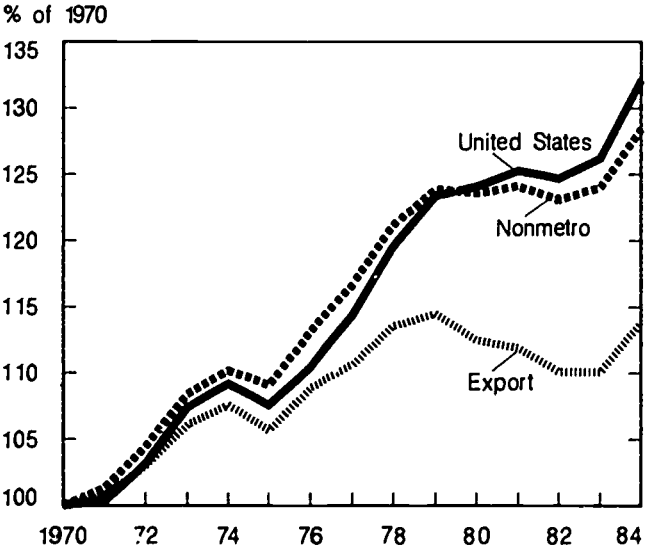
Farm Share of Total Personal Income by Type of County



Farm counties are those with 20 percent or more of labor and proprietors' income from farming, 1975-79. Export counties are those with 50 percent or more of total farm sales from corn, wheat, soybeans, cotton, and rice in 1982 Farm-export counties meet both these criteria Source: US Department of Commerce, Bureau of Economic Analysis

Chart 101

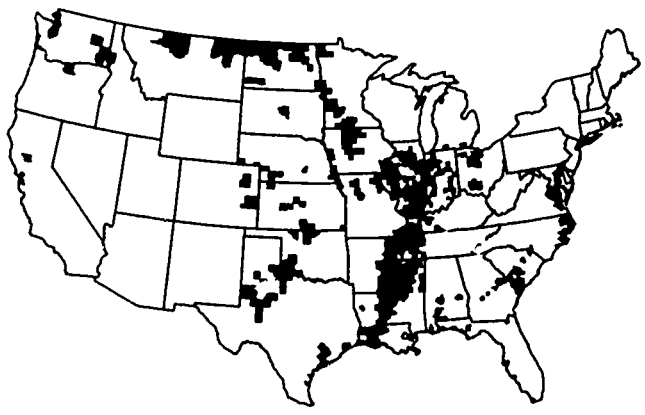
Total Employment by Type of County



Export counties are those with 50 percent or more of total farm sales from corn, wheat, soybeans, cotton, and rice in 1982 Source: US Department of Commerce, Bureau of Economic Analysis

Chart 102

Nonmetro Counties Dependent on Farm Exports



The 419 export counties are those with 50 percent or more of total farm sales from corn, wheat, soybeans cotton and rice in 1982
Source 1982 Census of Agriculture

Banking

Commercial bank failures during 1983-86 were concentrated in the Midwest, while S&L failures were spread more evenly across the country.

Chart 103

Commercial Bank Failures by County, 1983-86

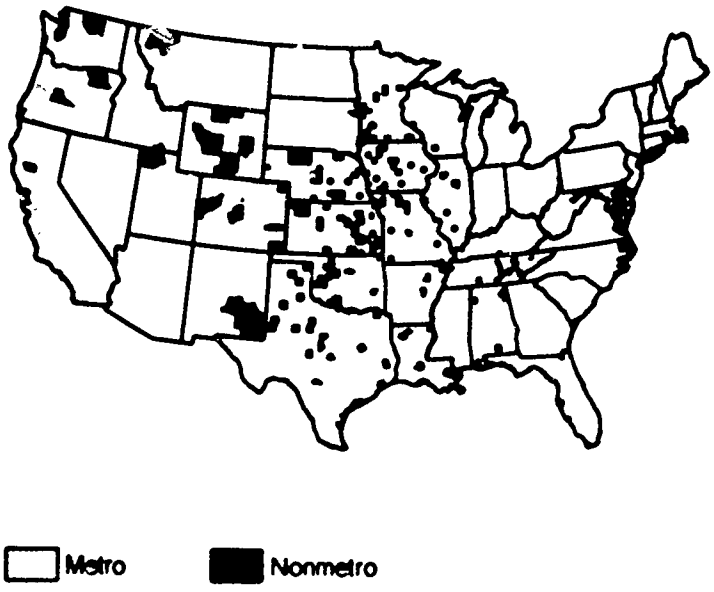


Chart 104

Savings and Loan Failures by County, 1983-86

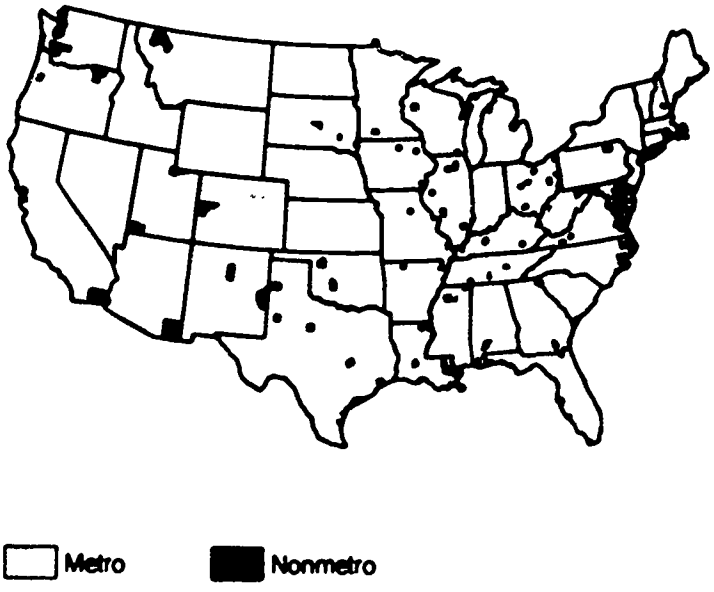


Chart 105

Financial Institution Failures

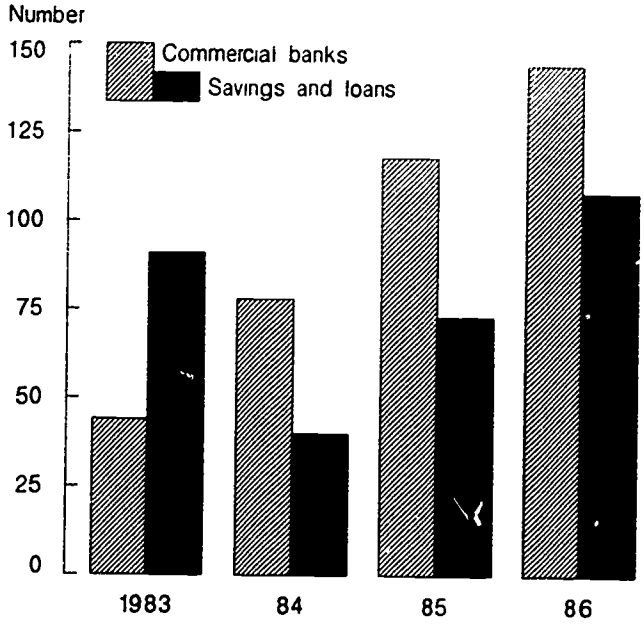
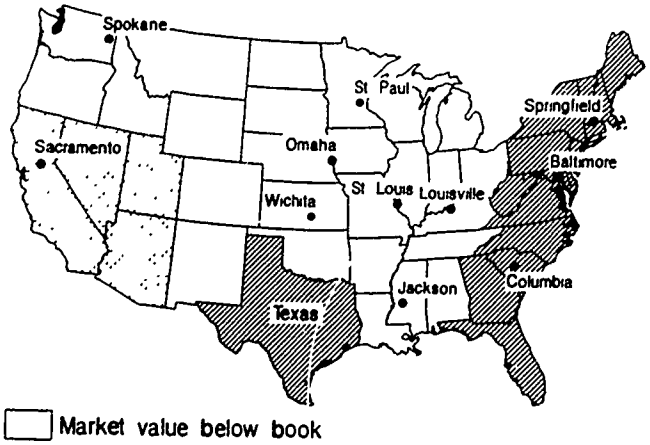


Chart 106

Market Versus Book Value of Federal Land Bank Stock by District, 1983-86



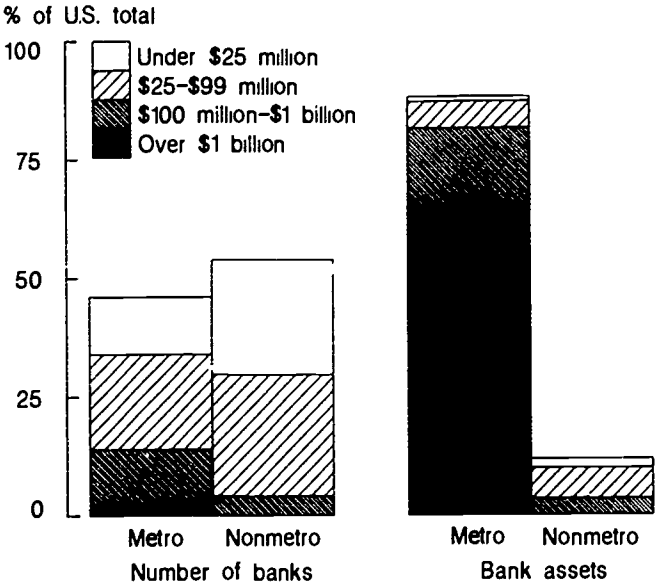
Book value is value originally paid by borrower for the stock. Market value is the value the stock would fetch in an open market.

Banking

Commercial banks headquartered in rural areas outnumber urban-based banks but hold less than 12 percent of all bank assets. About 33 percent of the savings and loans (S&L) are headquartered in rural areas and hold a little more than 10 percent of S&L industrial assets.

Chart 107

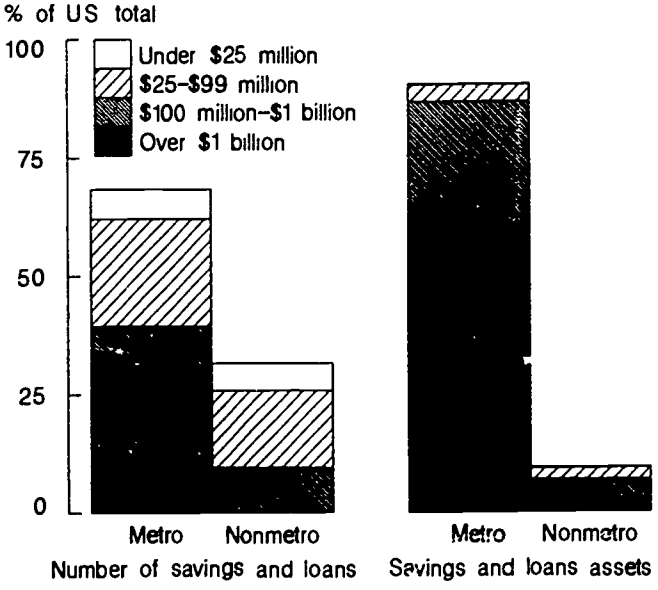
Nonmetro/Metro Banks and Bank Assets by Size



December 31, 1985 data US commercial banks

Chart 108

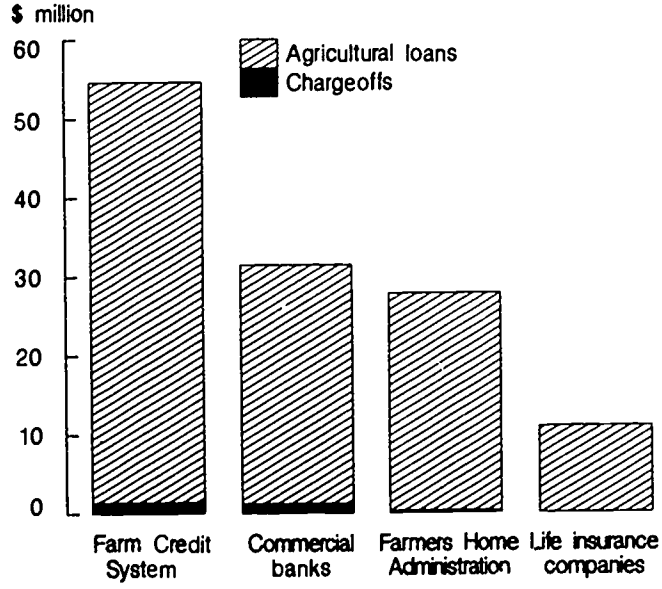
Nonmetro/Metro Savings and Loans Assets by Size



1986 data

Chart 109

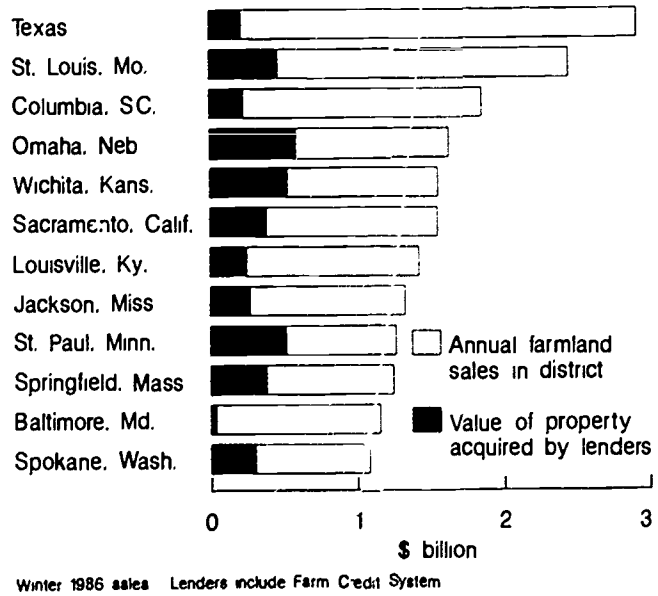
Agricultural Loan Volume and Chargeoffs by Major Lenders



1986 data. Chargeoffs are losses written off by lenders

Chart 110

Lender-Acquired Property as a Percentage of Total Farmland Sales



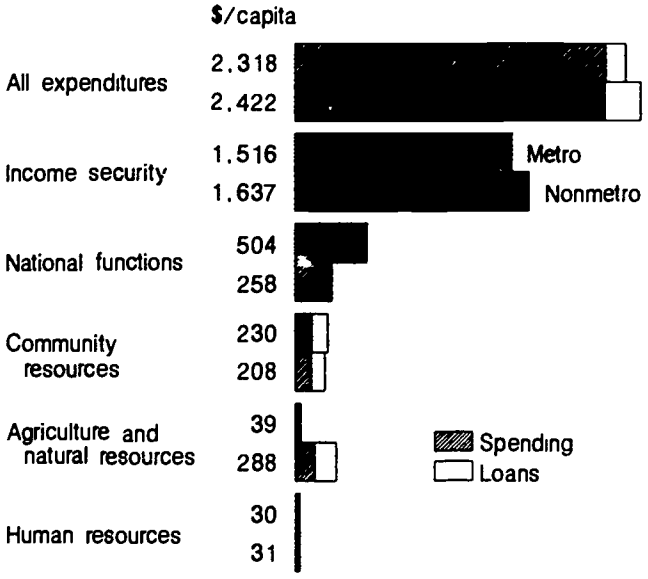
Winter 1986 sales Lenders include Farm Credit System

Federal Funds

Total Federal funding of nondefense programs, excluding credit programs, is nearly identical in metro and nonmetro counties. The types of Federal funds received by metro and nonmetro counties, however, differ markedly.

Chart 111

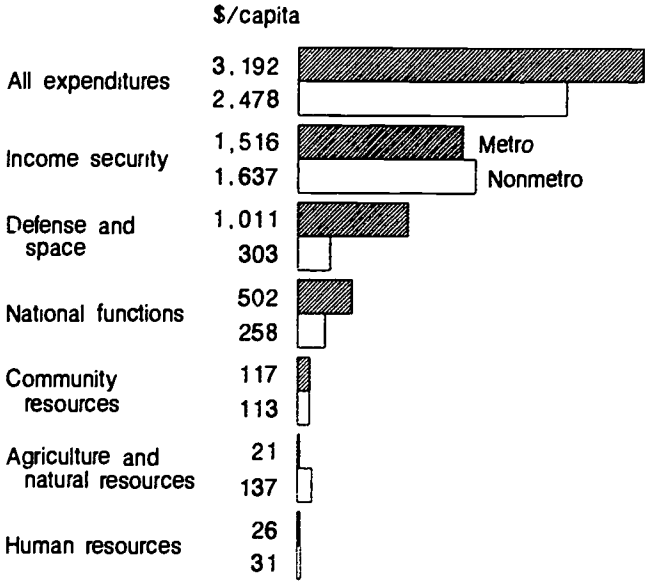
Nondefense Spending in Metro and Nonmetro Counties, by Function



Fiscal 1985 data

Chart 112

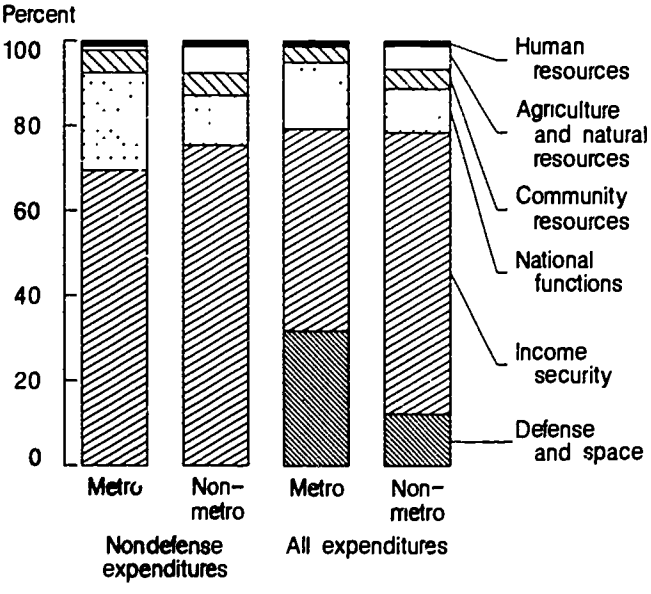
Federal Spending in Metro and Nonmetro Counties



Fiscal 1985 data Excludes loans

Chart 113

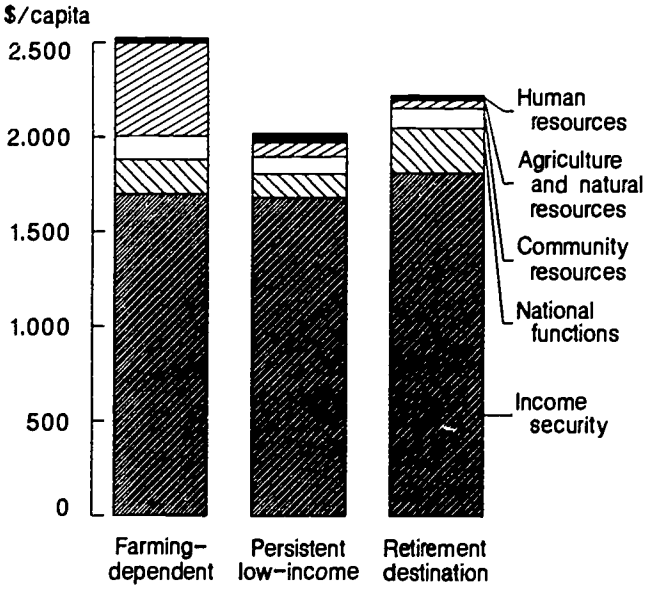
Distribution of Federal Spending



Fiscal 1985 data. Excludes loans

Chart 114

Nondefense Spending in Nonmetro Counties by Selected Type



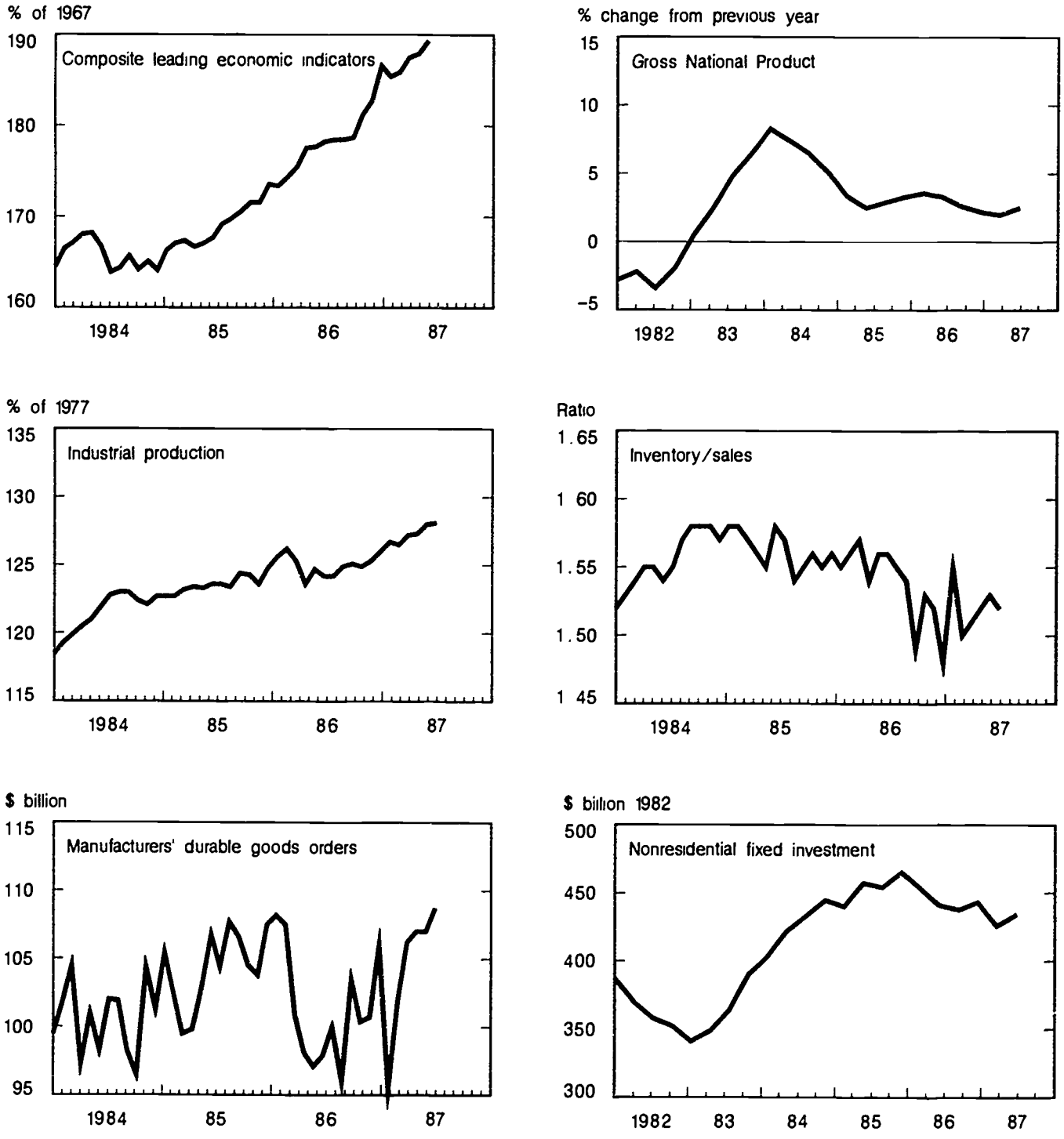
Fiscal 1985 data Excludes loans

Economic Indicators

Industrial production and Gross National Product picked up steam in 1987, paced by increases in nonresidential fixed investment. Leading economic indicators suggest continued growth in 1988.

Figure 115

General Economic Indicators: Industry

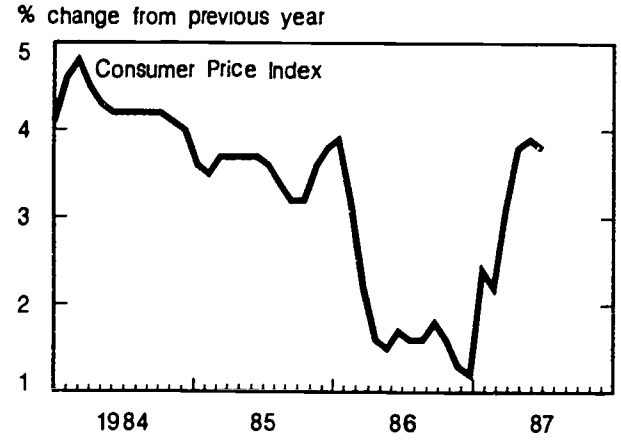


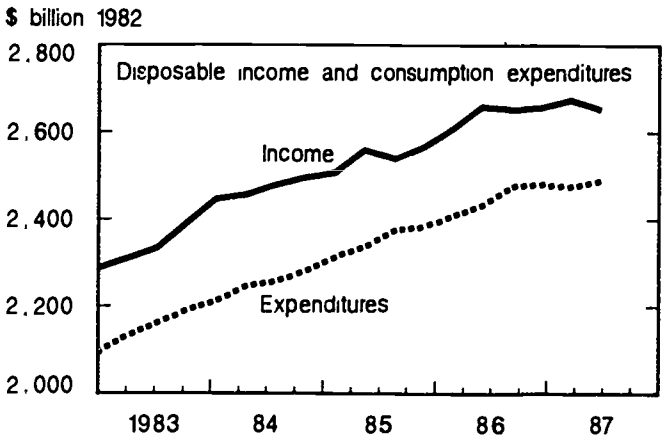
Economic Indicators

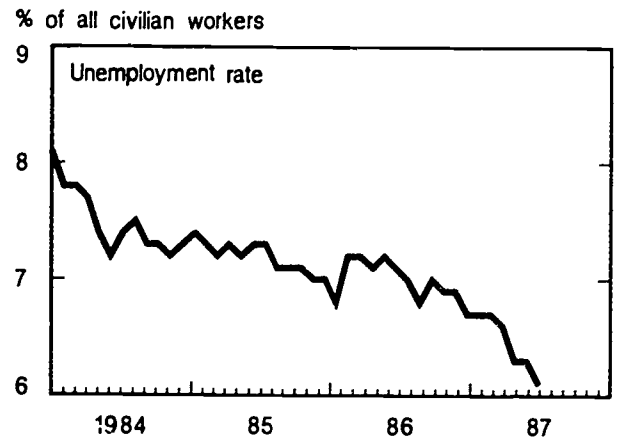
Unemployment continued to decline in 1987 while consumer price inflation accelerated from the 1986 low. Interest rates began rising while the consumer savings rate continued to slip.

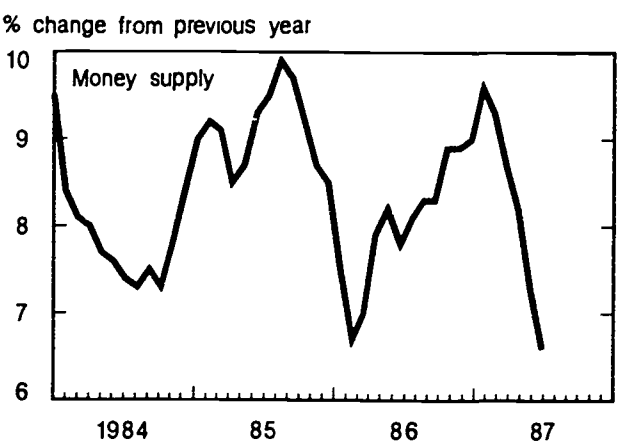
Figure 116

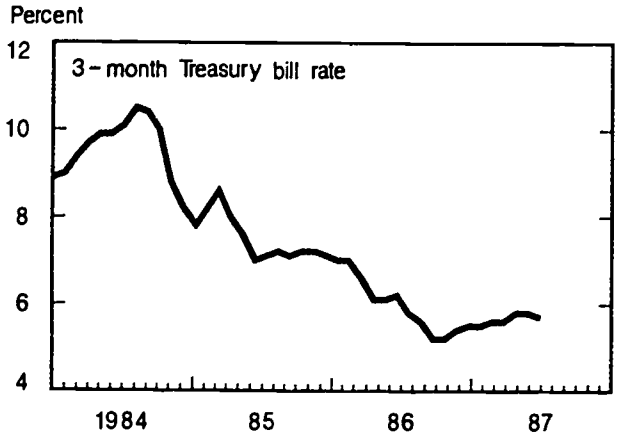
General Economic Indicators: Personal Economy

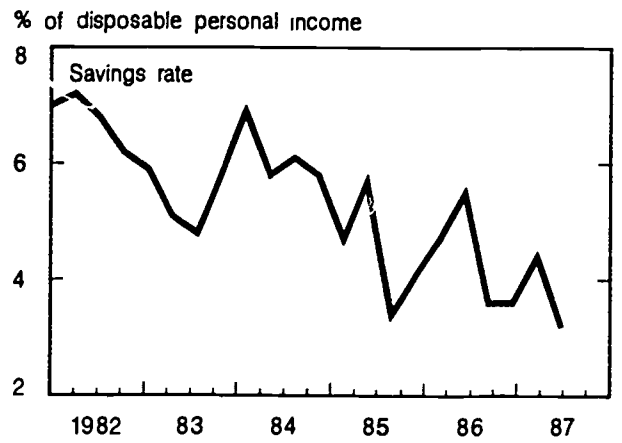










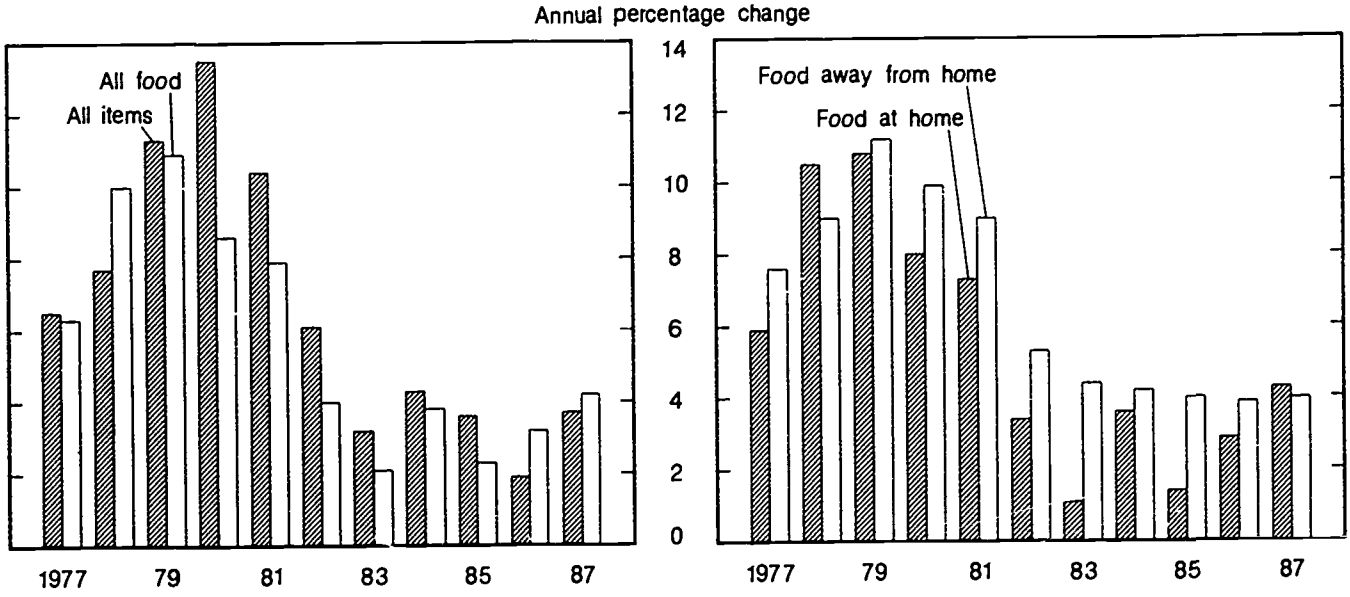


Consumer Prices

Retail food prices rose 4.1 percent in 1987, mainly due to an increase in the farm-to-retail price spread. Farm value of food rose, mainly because of higher cattle prices. But, this higher farm value caused little of the rise in retail prices because farm value accounts for an average of only 30 percent of the food dollar.

Chart 117

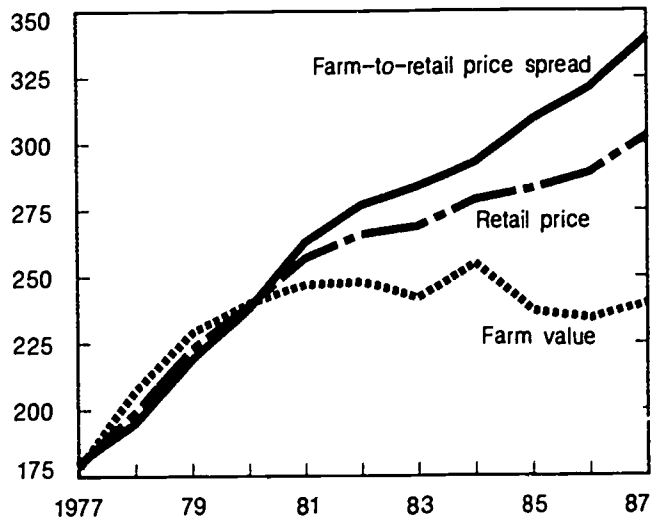
Consumer Price Index for Food



1987 forecast Source Bureau of Labor Statistics

Chart 118

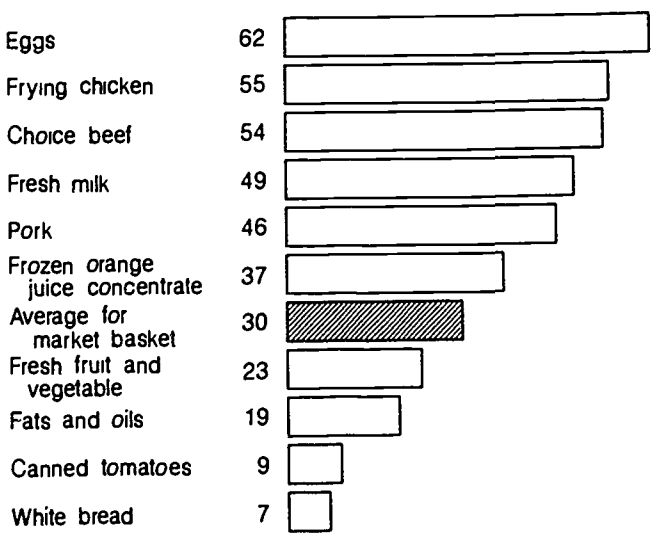
Retail Price, Farm Value, and Price Spread for Food



Data for a market basket of foods sold in retail stores Retail price is that paid by consumers Farm value is prices received by farmers for commodities Price spread represents all charges for processing and distribution

Chart 119

Farm Value Share of Retail Food Prices



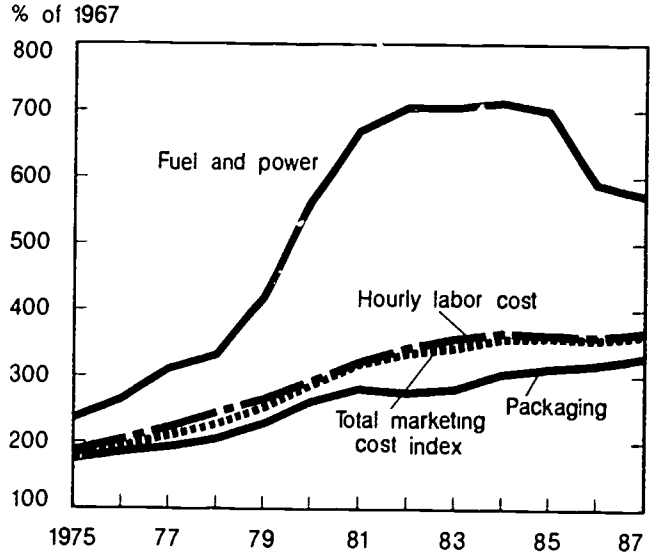
1986 data Farm value share of the proportion the farmer receives from the dollar the consumer spends The remainder of the dollar goes to marketing firms

Food Marketing Costs

Marketing costs, the largest part of food expenditures, have risen faster than the farm value of raw foodstuffs, reflecting the rising cost of labor, packaging, and other inputs.

Chart 120

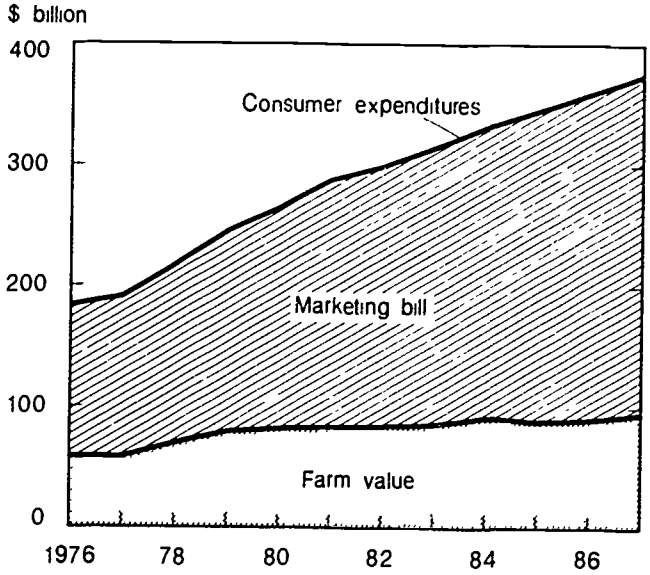
Food Processing, Wholesaling, and Retailing Costs



1987 forecast The marketing cost index measures changes in worker wages, salaries, and supplemental benefits and prices of purchased inputs such as packaging materials and fuel and power

Chart 121

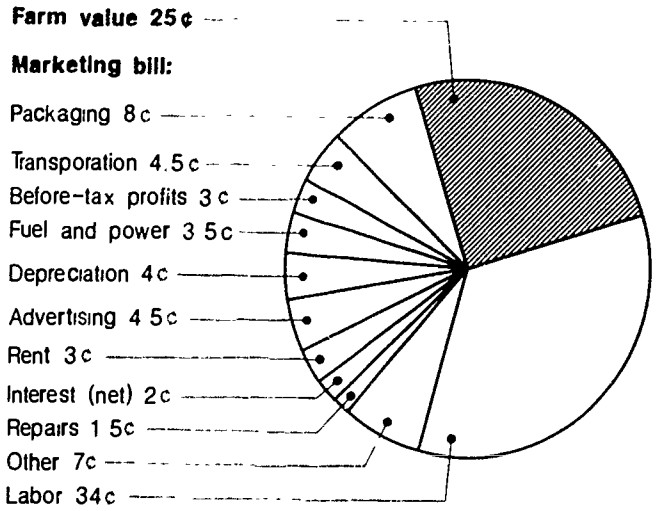
Marketing Bill, Farm Value, and Consumer Expenditures for Farm Foods



1987 preliminary Data for domestically produced farm foods purchased by civilian consumers for consumption both at home and away from home

Chart 122

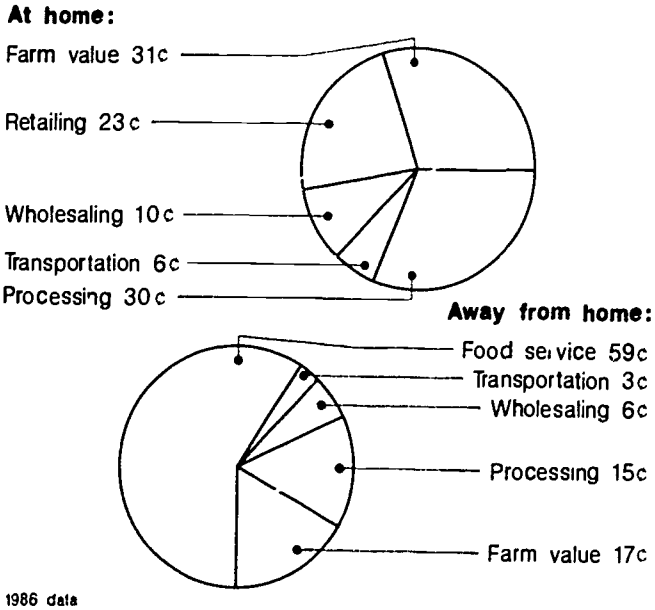
What a Dollar Spent on Food Paid for in 1987



1987 preliminary Other costs include property taxes and insurance, accounting and professional services promotion bad debts and miscellaneous items

Chart 123

Where the Food Dollar Goes At Home and Away



1986 data

Food Consumption

The average American consumed more poultry, fish, dairy products, sweeteners, and fats and oils, and less red meat and eggs in 1986 than in 1967.

Chart 124

Per Capita Consumption of Food

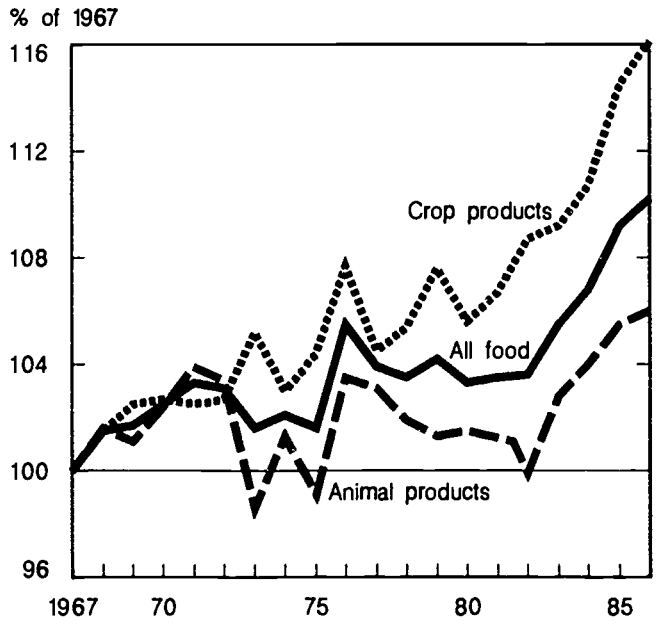


Chart 125

Per Capita Consumption of Meat, Poultry, and Fish

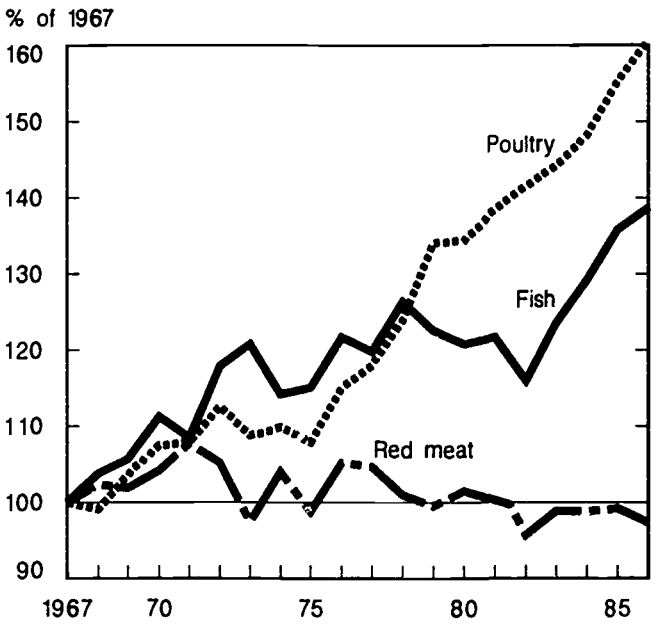


Chart 126

Per Capita Consumption of Eggs and Dairy Products

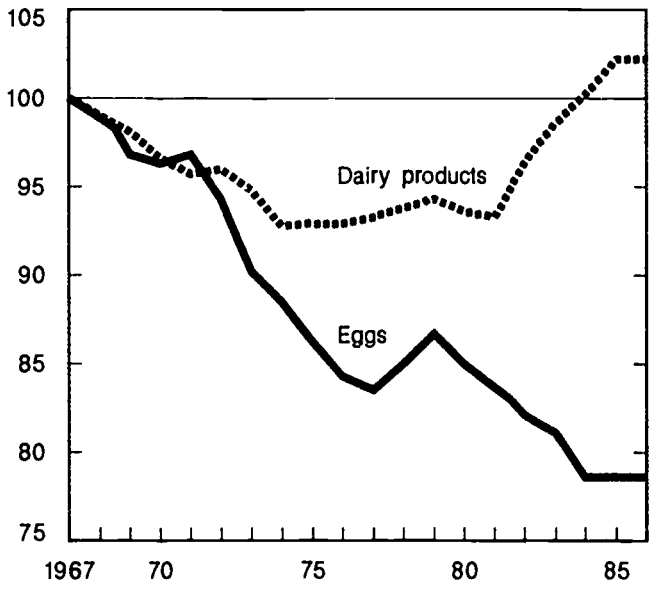
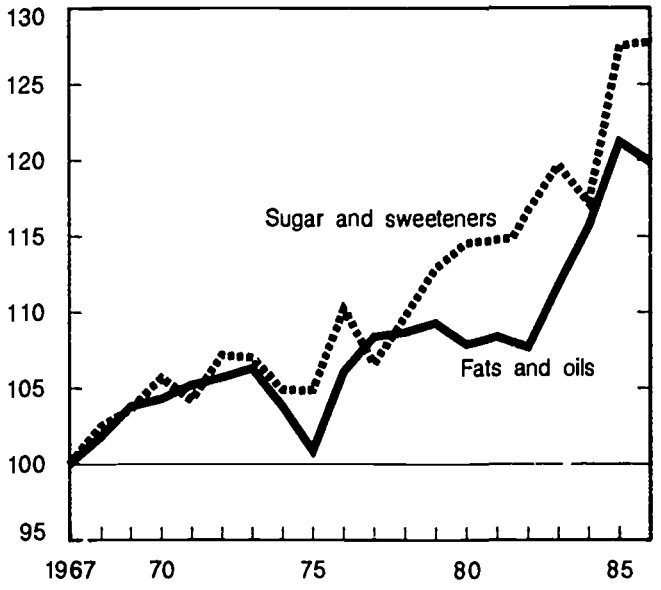


Chart 127

Per Capita Consumption of Selected Processed Products

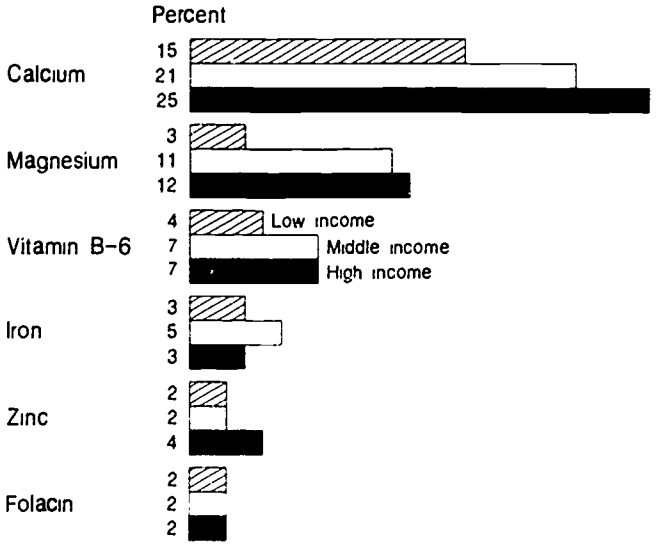


Diet

Surveys show the diets of women and children to be low in certain nutrients more often than those of men. Women's meat, poultry, and fish intake vary less by region than other food groups. Few women had diets at the levels of fat and fiber recommended by some authorities.

Chart 128

Percentage of Women Whose Diets Met RDA for Selected Nutrients by Income



Recommended Dietary Allowances Middle incomes fall between 131%-300% of the Federal Poverty Guidelines Low incomes fall below and high incomes fall above that range

Chart 129

Regional Comparison of Food Eaten by Women

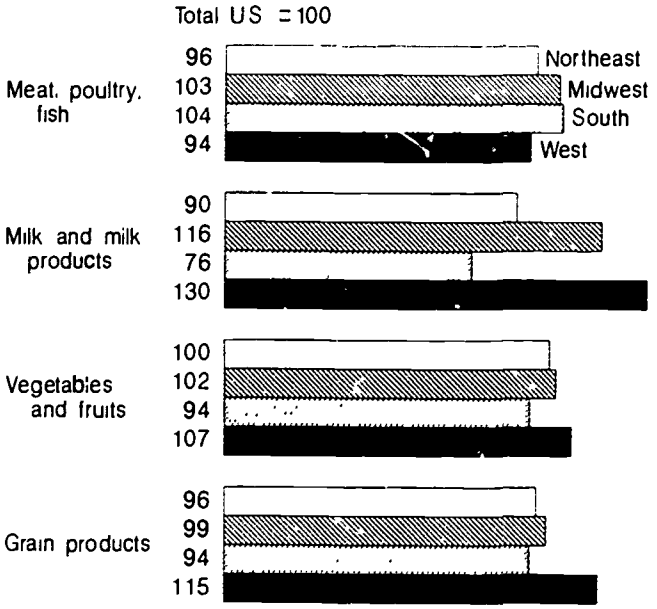
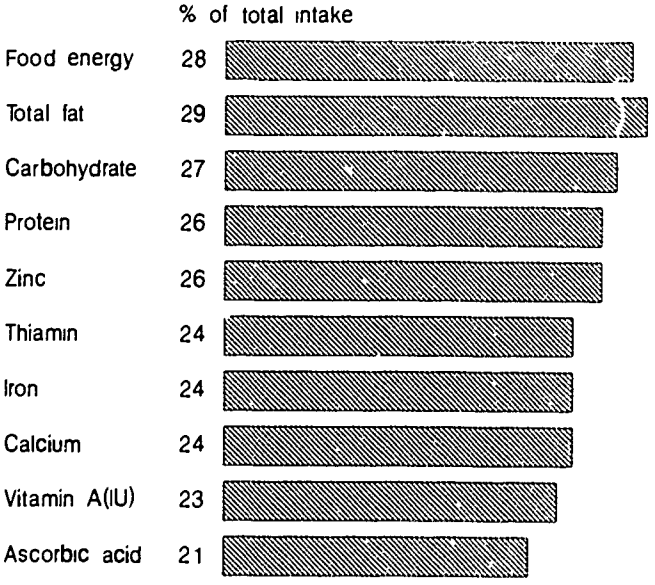


Chart 130

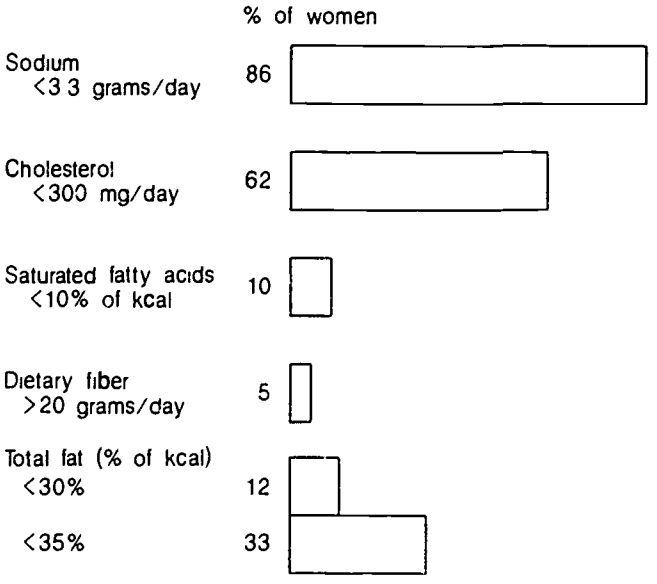
Nutrient Contribution of Food Eaten Away from Home by Women



IU is international unit

Chart 131

Percentage of Women With Diets at Specified Levels of Cholesterol, Sodium, Fat, and Fiber



Sodium excludes sodium in salt added at table

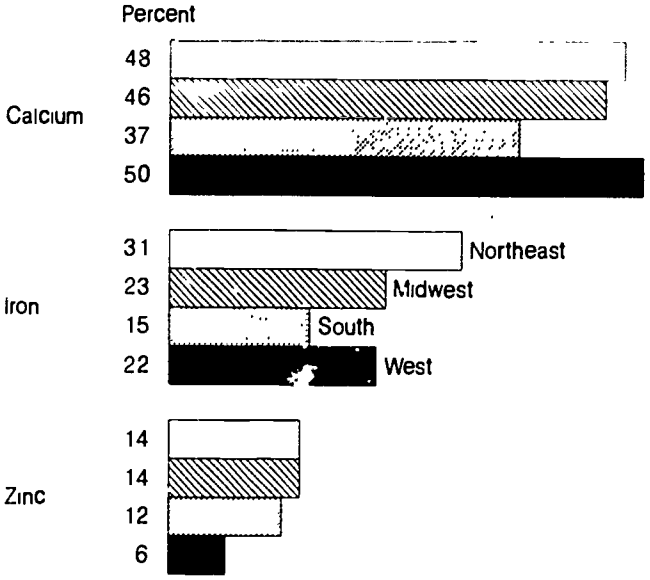
1985 data Data are means based on intakes over four nonconsecutive days by 1,088 women 19-50 years old. Comparable data for men not available. Source: Continuing Survey of Food Intakes by Individuals

Diet

Few children's diets met the RDA for iron and zinc. Snacks and food eaten away from home provide worthwhile amounts of most nutrients for children.

Chart 132

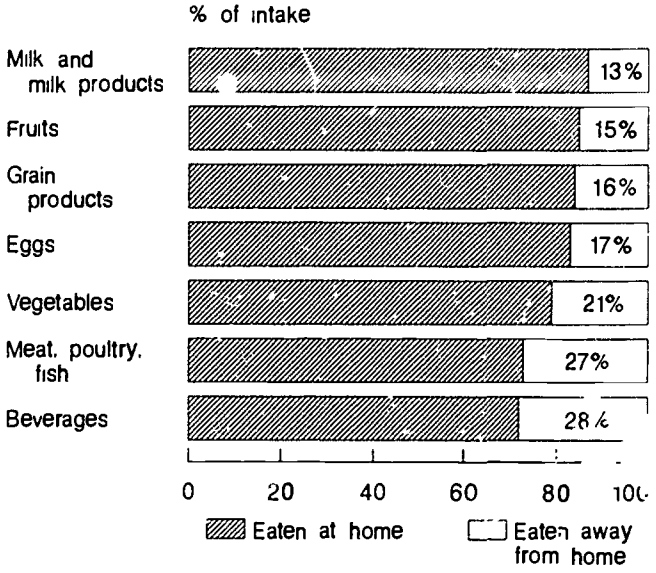
Percentage of Children Whose Diets Met RDA for Selected Nutrients by Region



Recommended Dietary Allowances

Chart 133

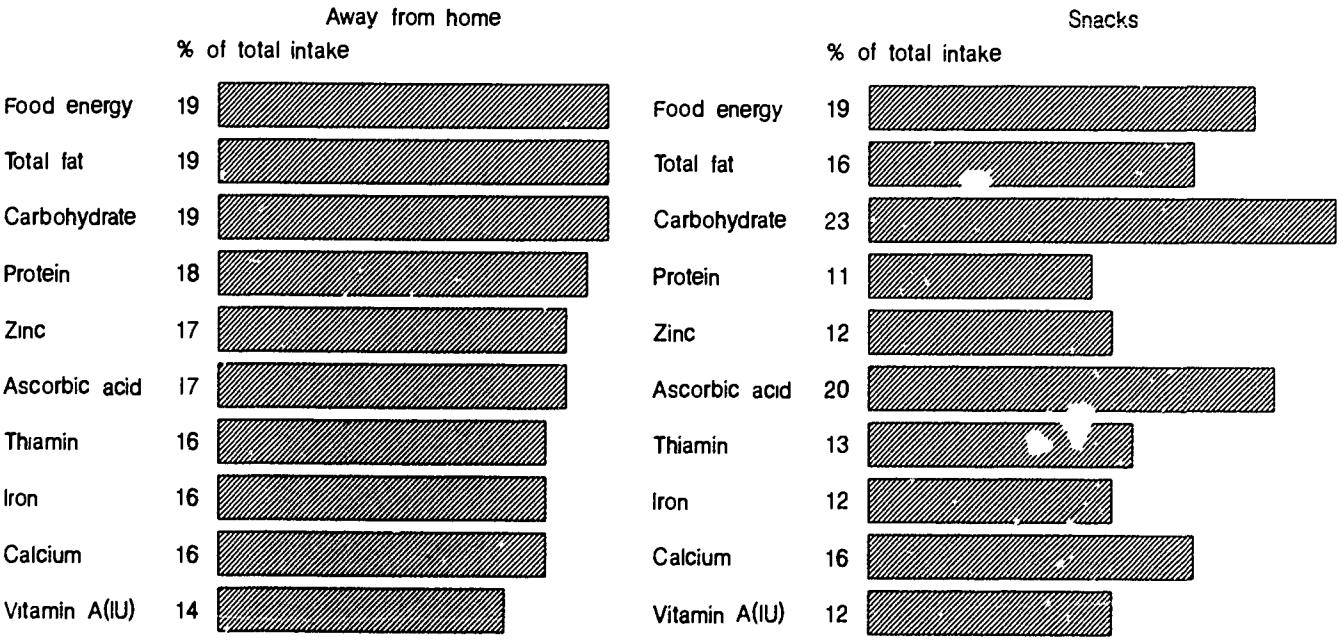
Proportions of Food Eaten at Home and Away from Home by Children



Beverages exclude milk and fruit juices, which are included in the milk and fruits categories, respectively

Chart 134

Nutrient Contribution of Food Eaten by Children

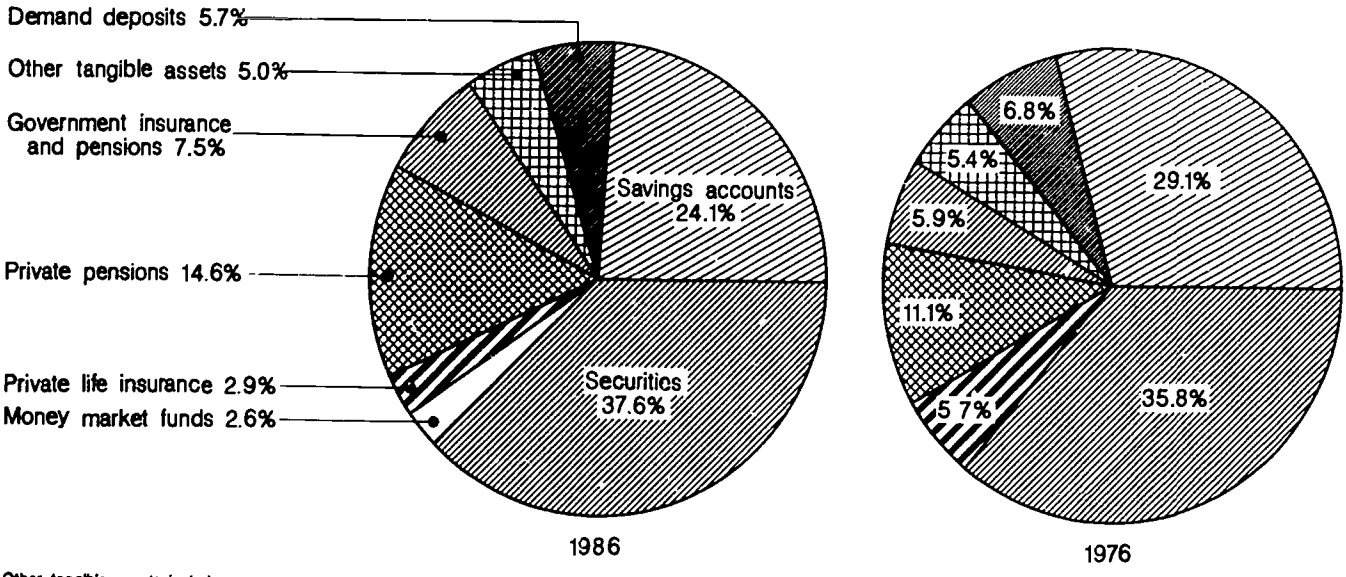


1985 data Data are means based on intakes over four nonconsecutive days by 371 children 1-5 years old Source. Continuing Survey of Food Intakes by Individuals.

Family Economics

Consumers have assumed higher levels of debt as loan rates have fallen since 1982. Individuals decreased the proportion of their assets held in savings accounts, down to 24.1 percent in 1986 from 29.1 percent in 1976.

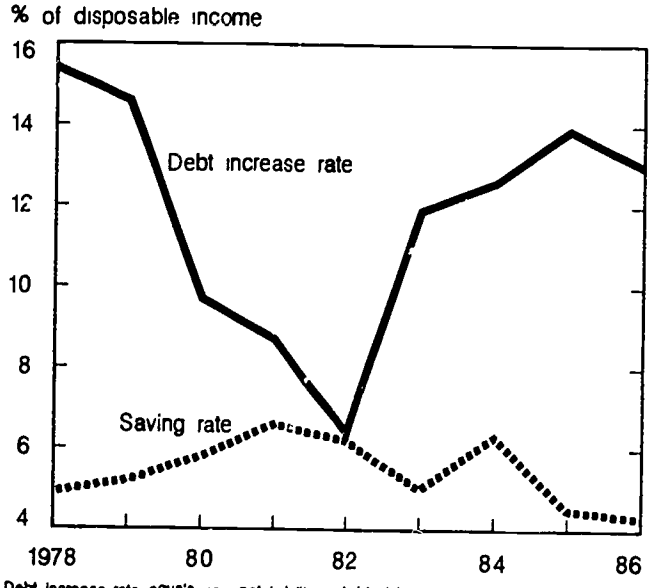
Chart 135
Distribution of Financial Assets



Other tangible assets include residential and nonresidential fixed assets, consumer durables, and inventories
Source: Federal Reserve Board

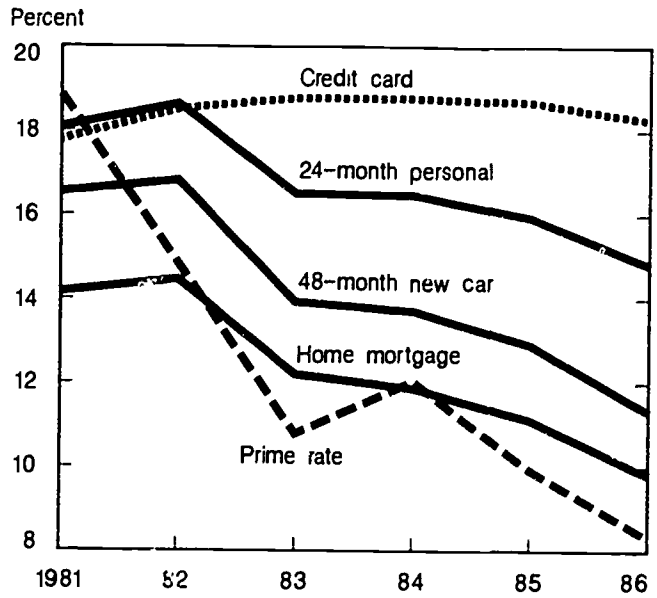
1976 money market funds were less than 1 percent

Chart 136
Household Debt and Saving



Debt increase rate equals new net liabilities divided by disposable personal income
Source: Federal Reserve Board and Bureau of Economic Analysis

Chart 137
Consumer Loan Rates



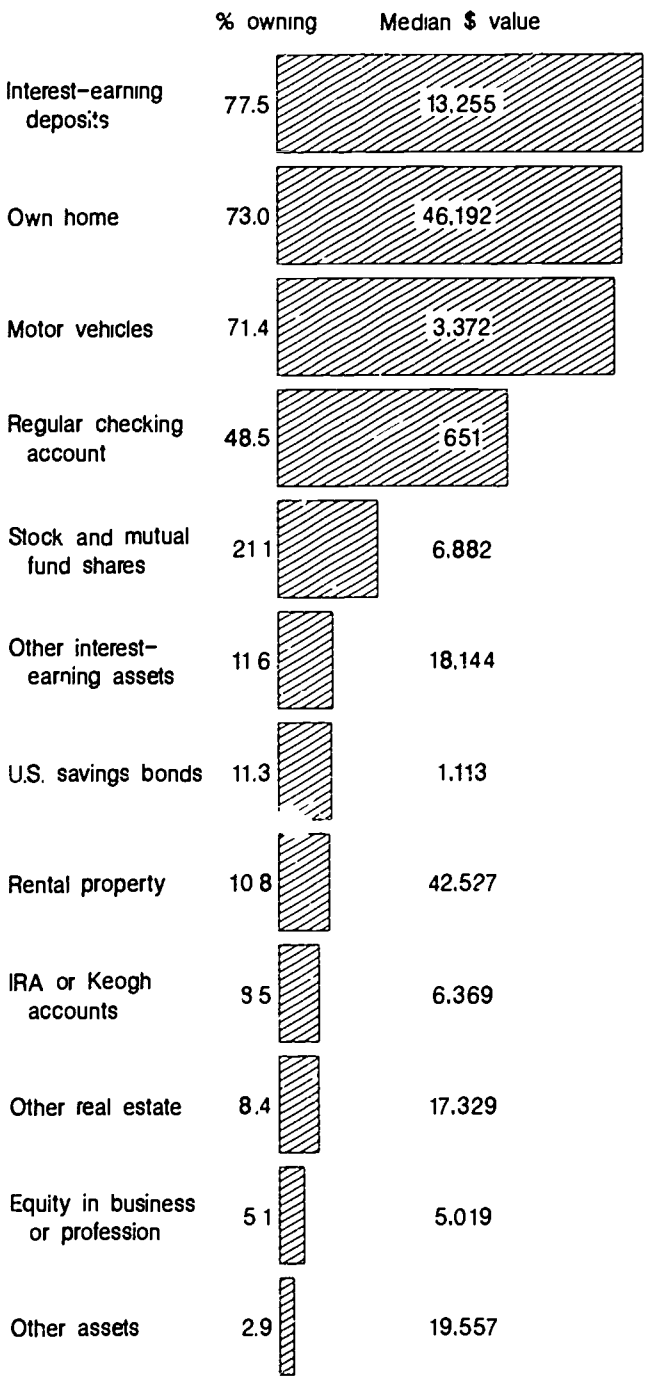
Annual averages
Source: Federal Reserve Bulletin

Family Economics

Most of the elderly have interest-earning deposits and home equity among their assets. Excluding home equity, elderly couples have higher net worth than younger couples. Median real income for the elderly has risen steadily.

Chart 138

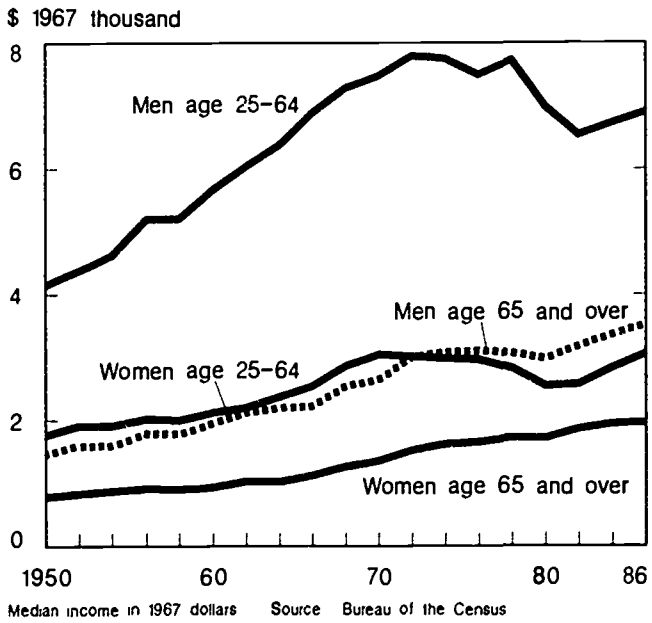
Ownership of Assets by the Elderly



1984 data. Median net worth: age 65–69, $66,621; age 70–74, $60,573, age 75 and over, $55,178 Source: Bureau of the Census

Chart 139

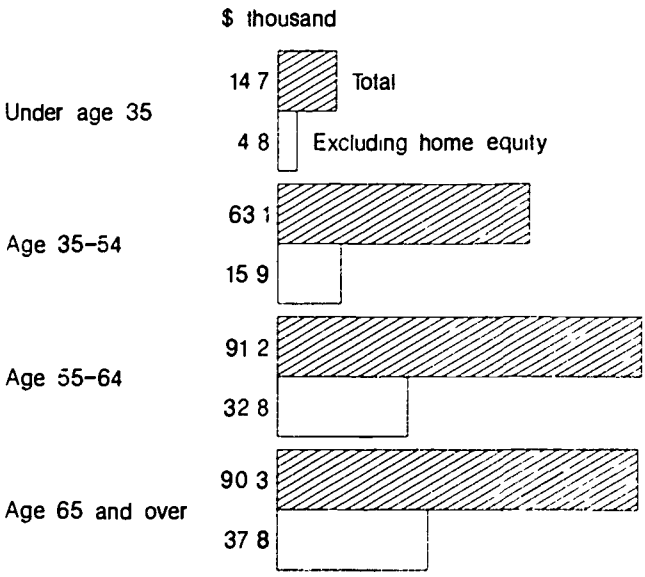
Median Income by Age and Sex



Median income in 1967 dollars Source Bureau of the Census

Chart 140

Median Net Worth of Married-Couple Households



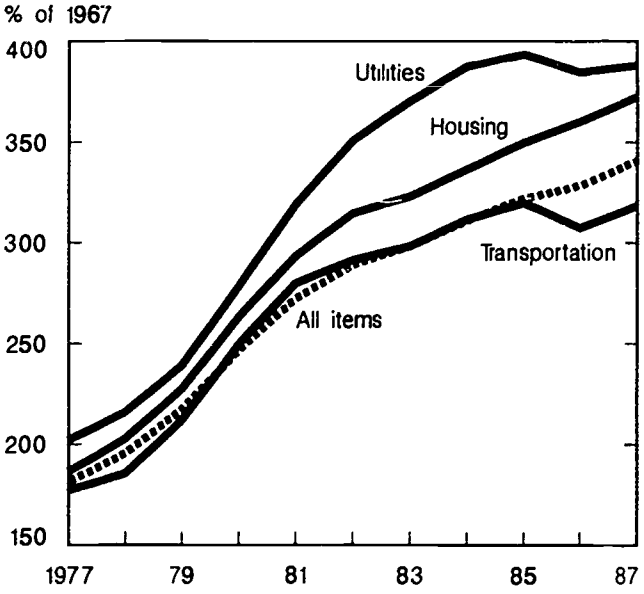
1984 data Source Bureau of the Census

Family Economics

Utility prices increased faster than housing prices from 1979-85. Spending for housing and transportation increased with income level. Families spend between 25 and 30 percent of their transportation dollar on gas and oil.

Chart 141

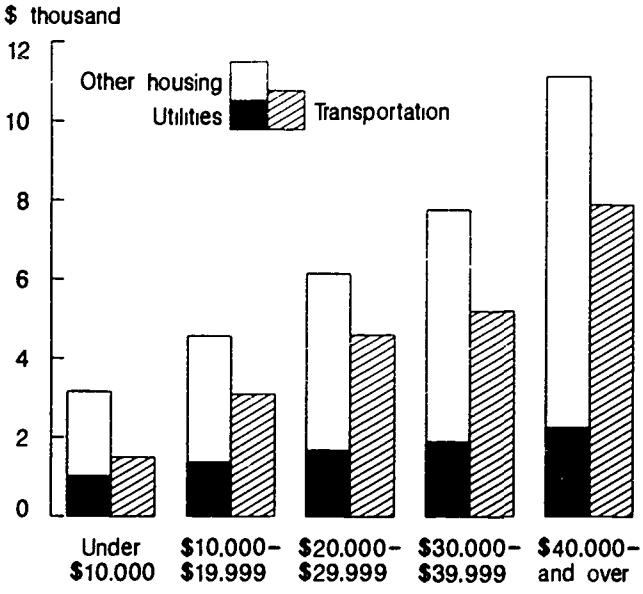
Changes in Consumer Prices for Housing, Utilities, and Transportation



Annual averages 1977-86 July data for 1987 Source Bureau of Labor Statistics

Chart 142

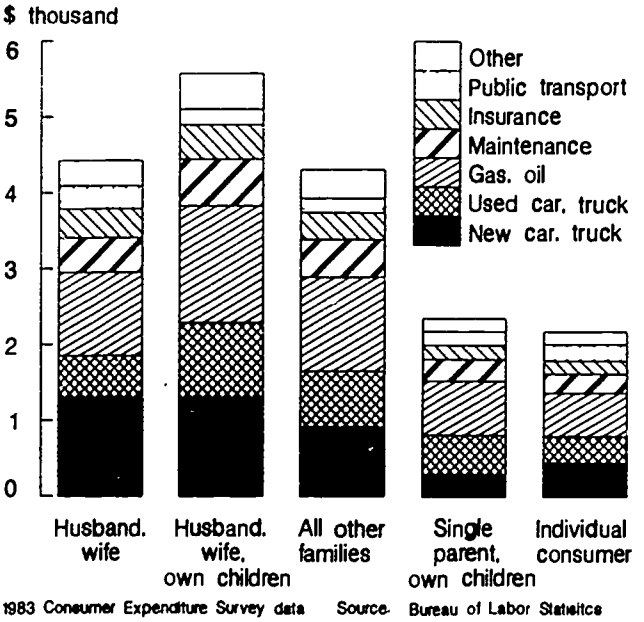
Housing and Transportation Expenditures by Income Level



1983 Consumer Expenditure Survey data Source Bureau of Labor Statistics

Chart 143

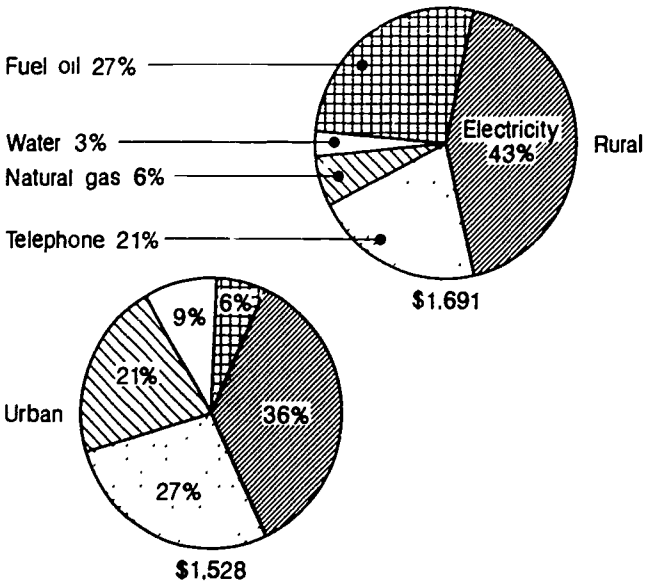
Transportation Expenditures by Family Composition



1983 Consumer Expenditure Survey data Source Bureau of Labor Statistics

Chart 144

Distribution of Utility Expenditures



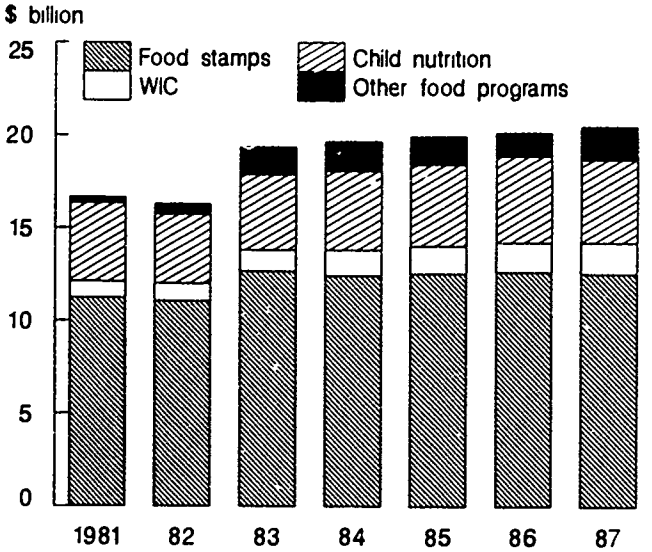
1983 Consumer Expenditure Survey data Source Bureau of Labor Statistics

Food Assistance

Expenditures for USDA food assistance programs and benefits have increased about 44 percent from 1980 to 1987. About 61 percent of those 1987 expenditures were for the food stamp program.

Chart 145

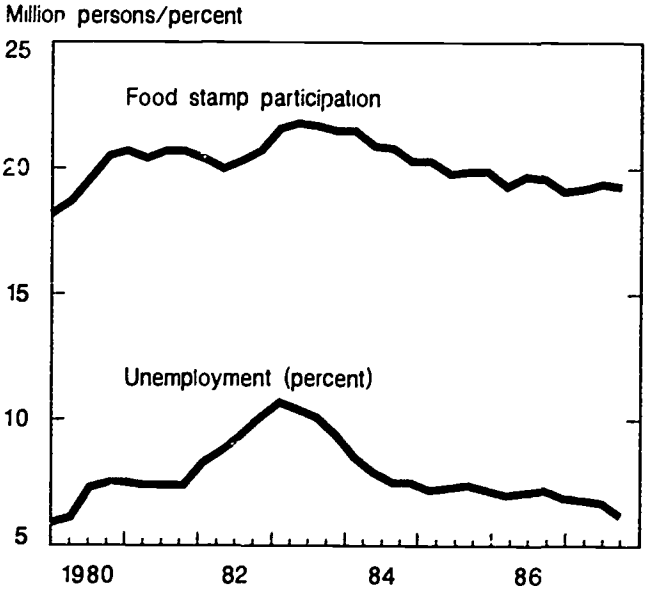
USDA Costs for Food Assistance



1987 estimated. Fiscal years. Other programs include administrative costs and surplus commodities. Food stamps include cash assistance for Puerto Rico. WIC is Women, Infants, and Children Program.

Chart 146

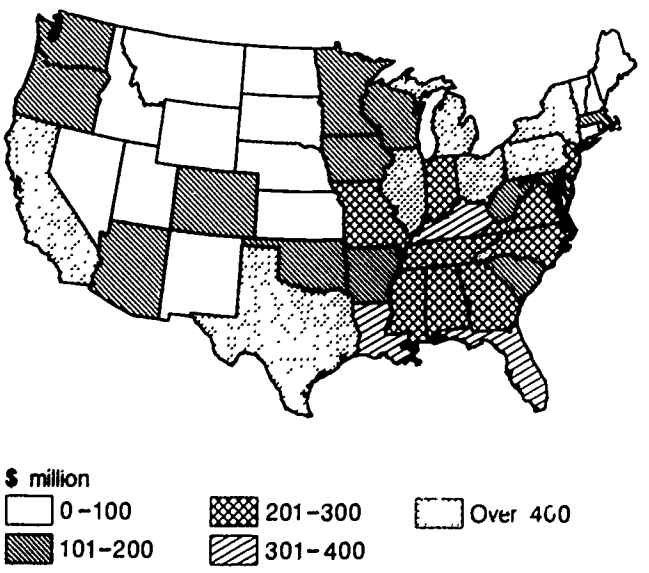
Unemployment Rate and Participation in the Food Stamp Program



1987 estimated. Seasonally adjusted fiscal year data.

Chart 147

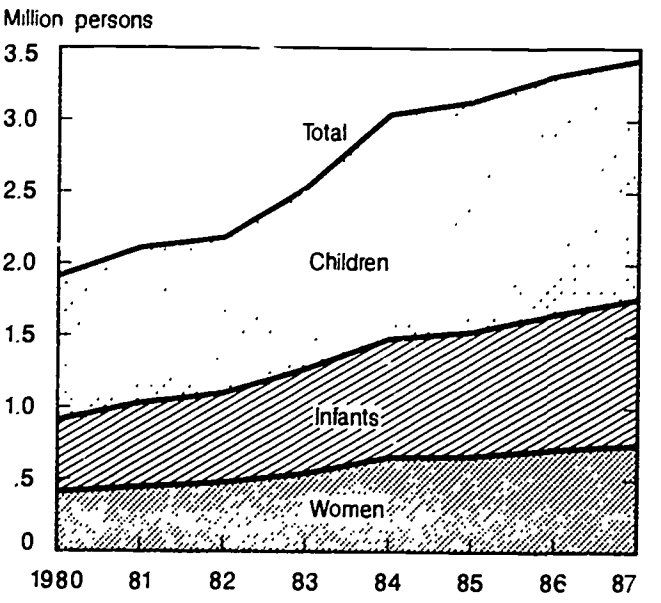
Expenditures for Food Assistance for the Food Stamp Program by State



1986 fiscal year data.

Chart 148

Participants in the WIC Program

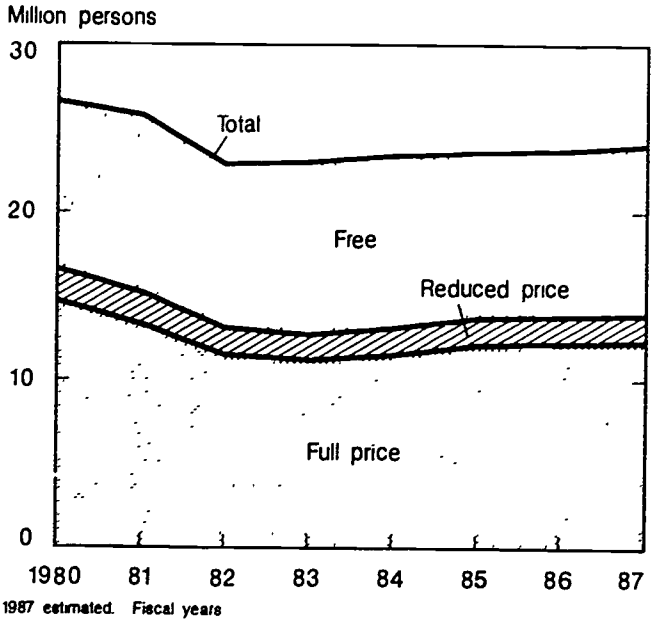


1987 estimated. Fiscal years.

Child Nutrition and Food Distribution

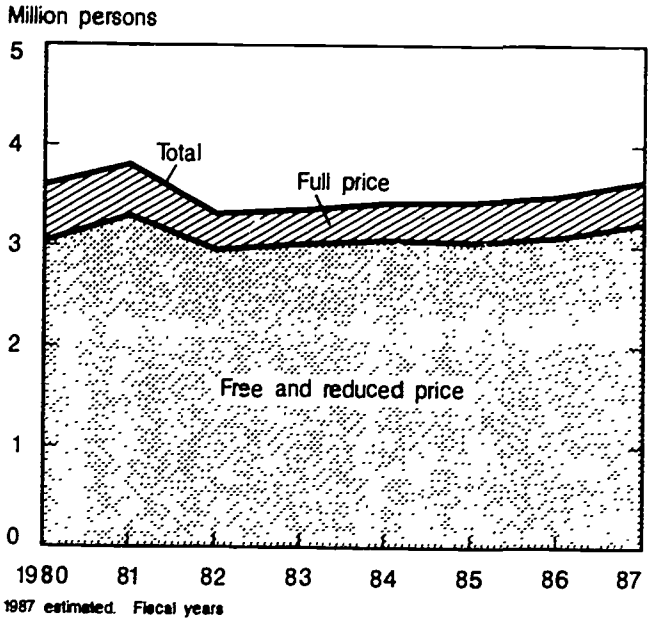
Participation in the school lunch and breakfast programs rose in 1987 for the fifth straight year; about half of the increases were participants paying full price for meals. Number of meals served under the child care food program reached a record high in 1987.

Chart 149
Children in the National School Lunch Program



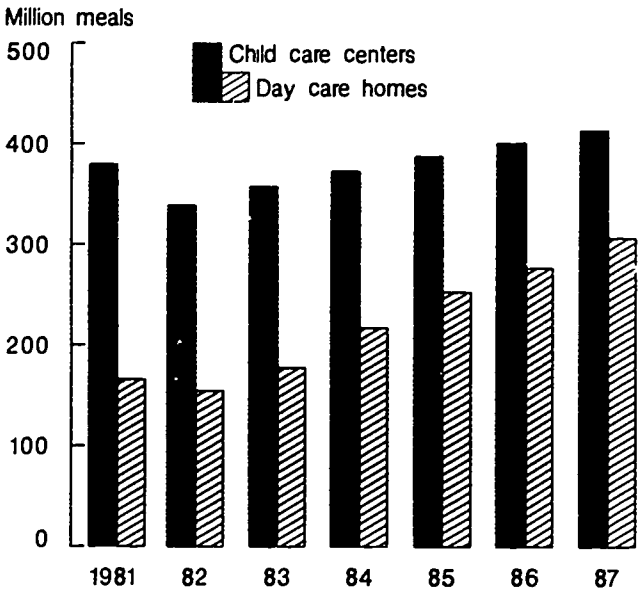
1987 estimated. Fiscal years

Chart 150
Children in the School Breakfast Program



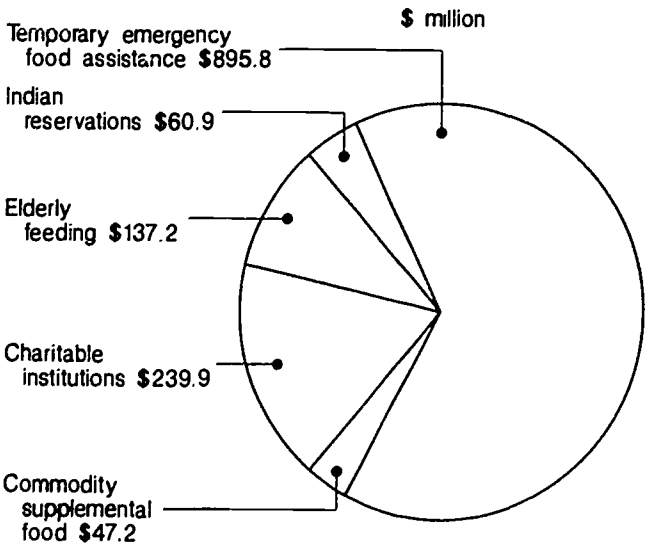
1987 estimated. Fiscal years

Chart 151
Meals Served in the Child Care Food Program



1987 estimated. Fiscal years

Chart 152
Food Donation Costs



1986 preliminary fiscal year data. Excludes Child Nutrition Programs

Producer Subsidy Equivalents

Producer subsidy equivalents (PSE's) measure levels of support (or taxation) provided to producers by domestic farm programs and agricultural trade barriers. PSE's report the value of Government support as a percentage of producers' agricultural income (cash receipts plus direct payments).

Chart 153

Average Producer Subsidy Equivalents for Grains, Livestock, Dairy, Oilseeds, and Sugar

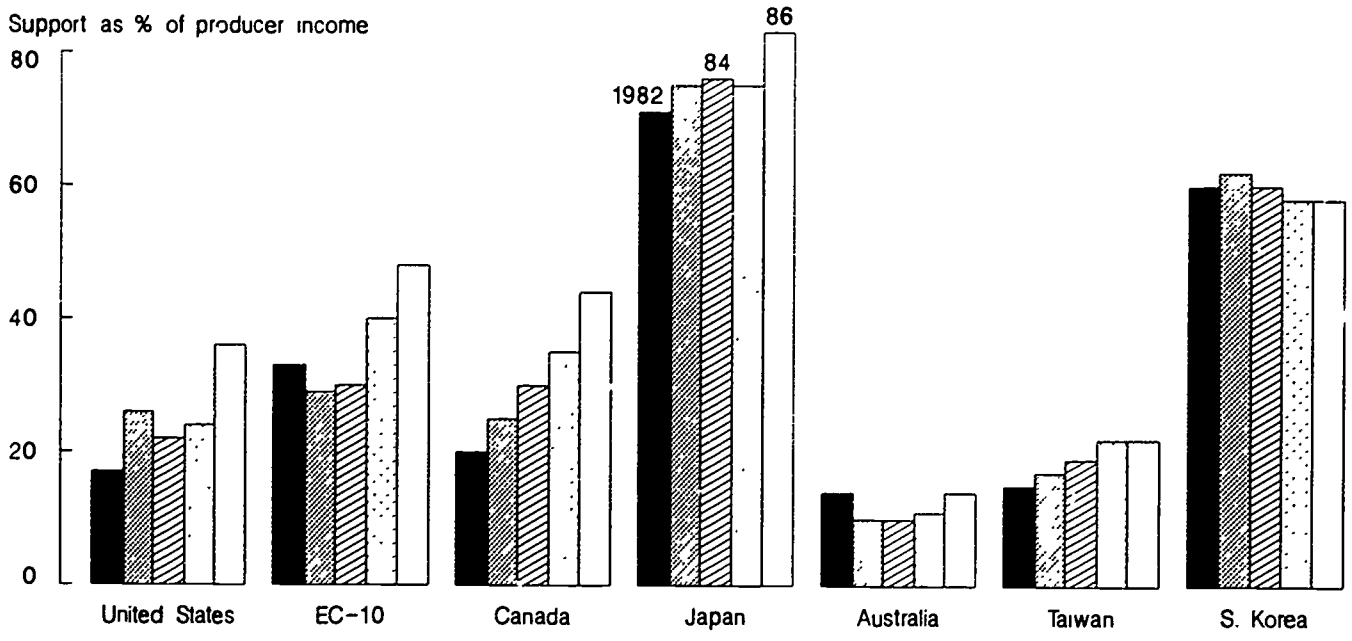


Chart 154

Distribution of U.S. Assistance by Commodity

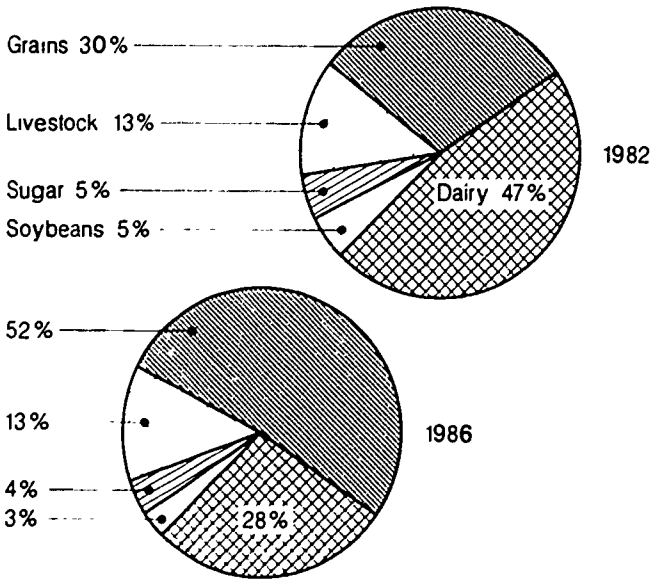
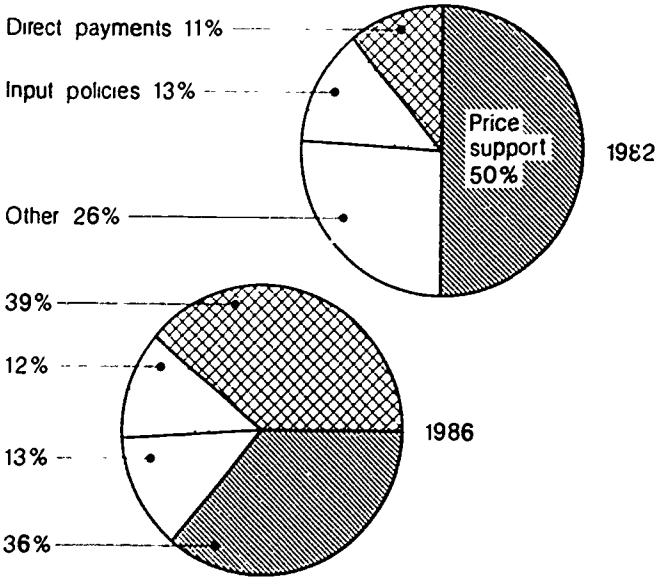


Chart 155

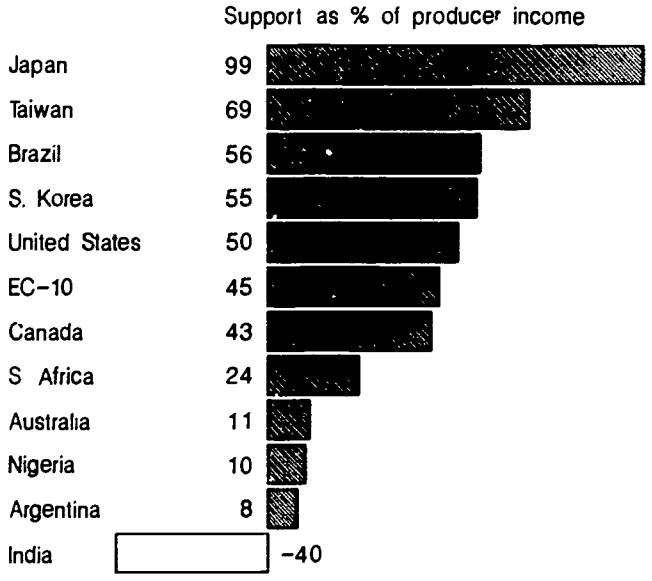
Distribution of U.S. Assistance by Type of Assistance



Producer Subsidy Equivalents

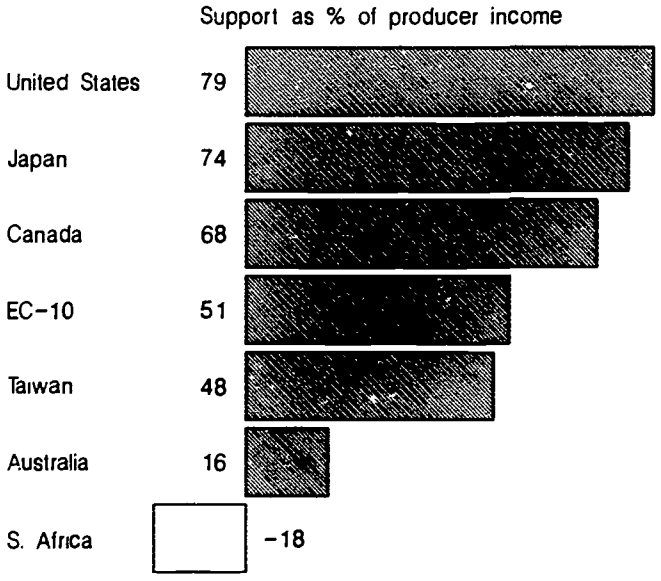
Government intervention in agricultural markets rose in most countries during the 1980's. Governments restrict market access to support domestic producer prices, and increase direct budget outlays for agriculture. The current round of multilateral trade negotiations focuses on market access and use of direct and indirect subsidies.

Chart 156
Producer Subsidy Equivalents for Wheat



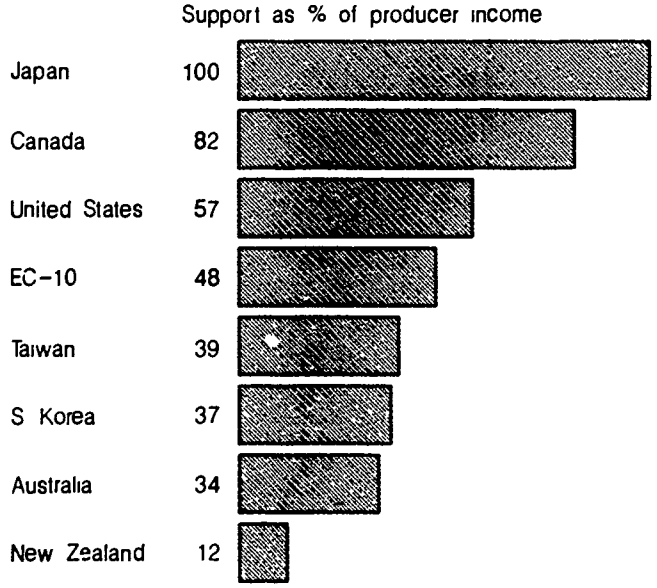
1985-86 average data

Chart 157
Producer Subsidy Equivalents for Sugar



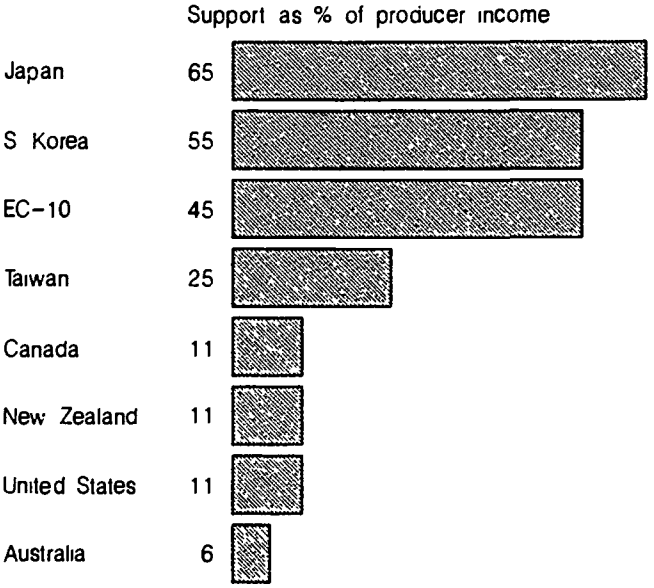
1985-86 average data

Chart 158
Producer Subsidy Equivalents for Dairy



1985-86 average data

Chart 159
Producer Subsidy Equivalents for Beef



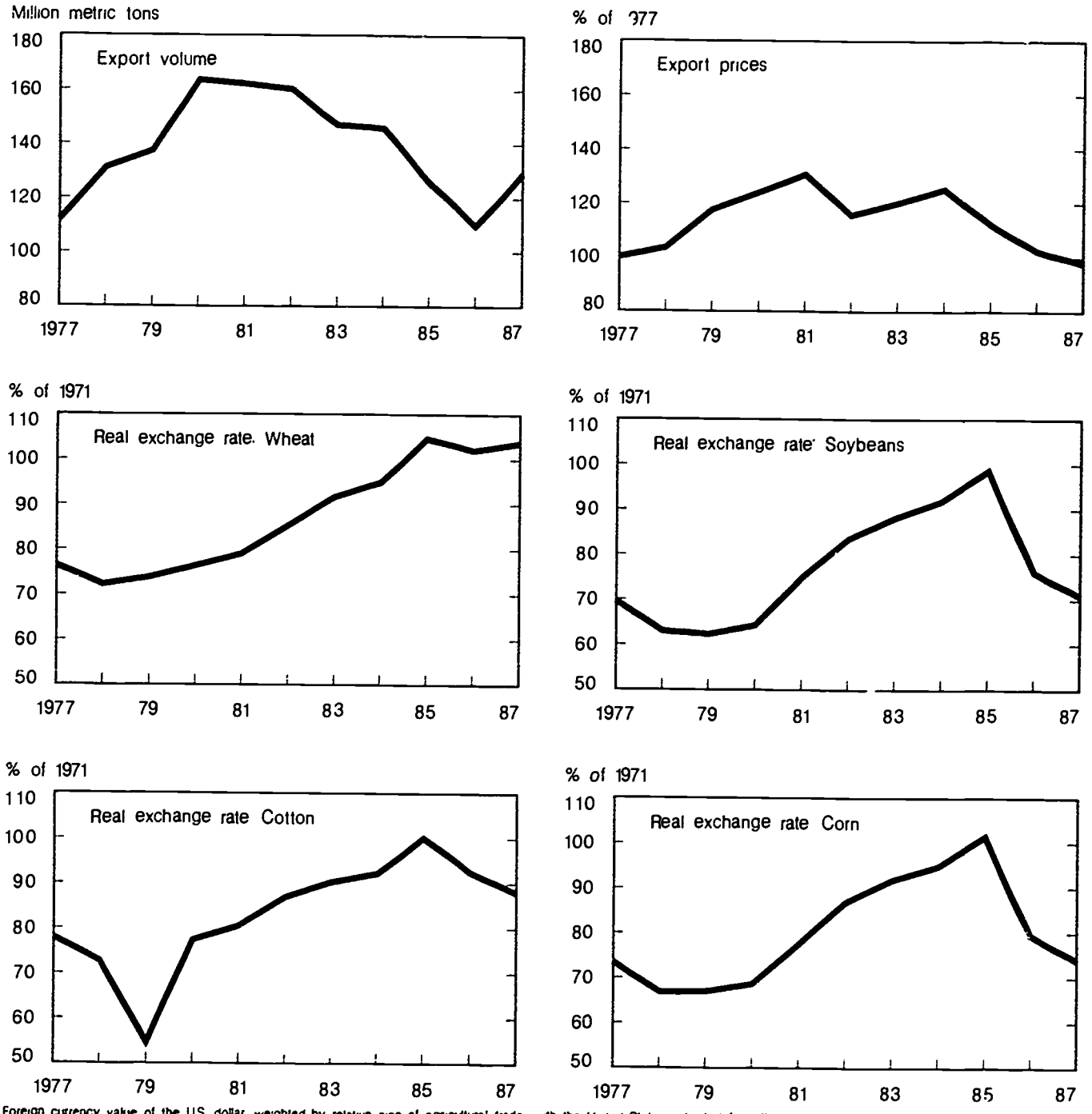
1985-86 average data

U.S. Trade

U.S. export volume rebounded sharply in fiscal 1987 from its lowest level in 11 years. The Export Enhancement Program aided grain sales, which make up 65-70 percent of total export volume. The dollar fell against most major currencies, making U.S. products more affordable to overseas buyers.

Chart 160

U.S. Agricultural Trade Indicators



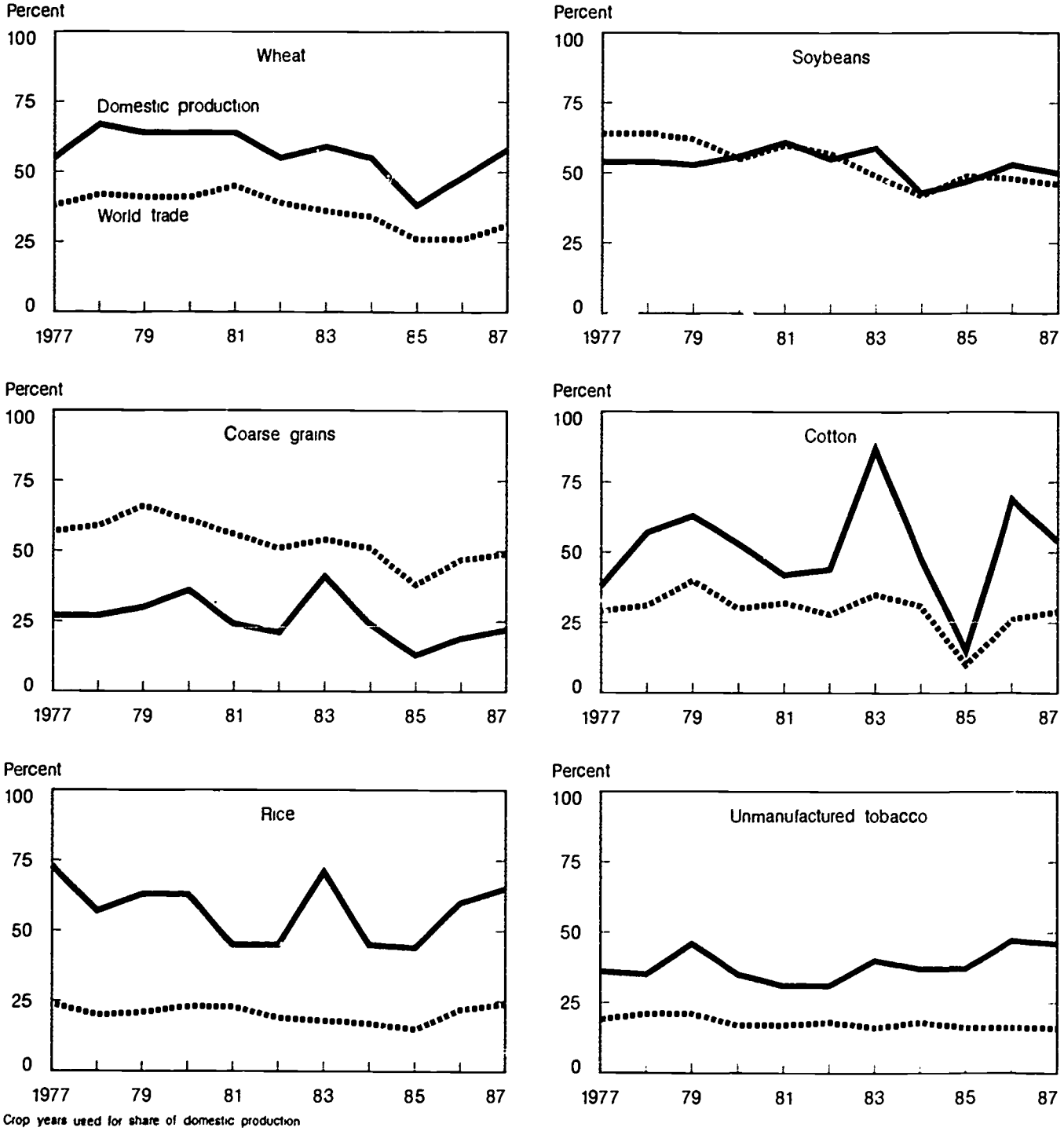
Foreign currency value of the US dollar, weighted by relative size of agricultural trade with the United States, adjusted for inflation by use of a Consumer Price Index for the countries involved. An increasing value indicates that the dollar appreciated against the basket of currencies represented in that commodity market

U.S. Trade

U.S. share of farm production exported returned to normal for most commodities in 1987. U.S. market share of world trade also improved for most commodities. but was still below that of the late 1970's and early 1980's, particularly for wheat, soybeans, and coarse grains.

Chart 161

U.S. Exports: Share of Domestic Production and World Trade



Crop years used for share of domestic production

U.S. Trade

Export prices in 1987 were at their lowest level since the early 1970's. Foreign demand for U.S. farm commodities has fallen 35 percent since 1981, particularly for grains and oilseeds. U.S. agricultural exports, other than grains and oilseeds, reached record highs in both volume and value in fiscal 1987.

Chart 162
U.S. Agricultural Exports and Farm Prices

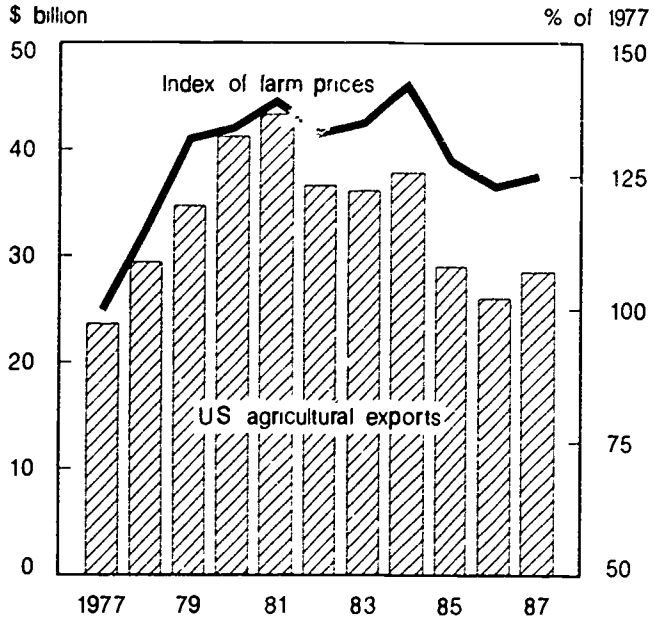


Chart 163
Export Prices for Major U.S. Crops

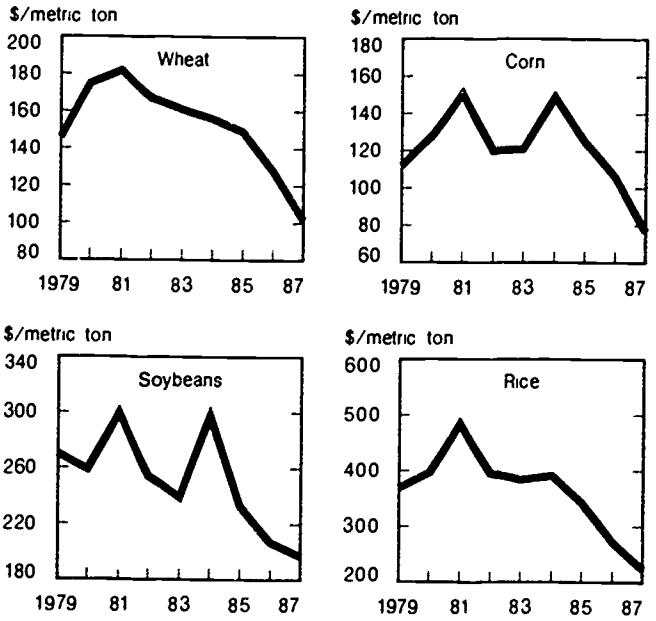


Chart 164
Value of U.S. Agricultural Exports by Commodity

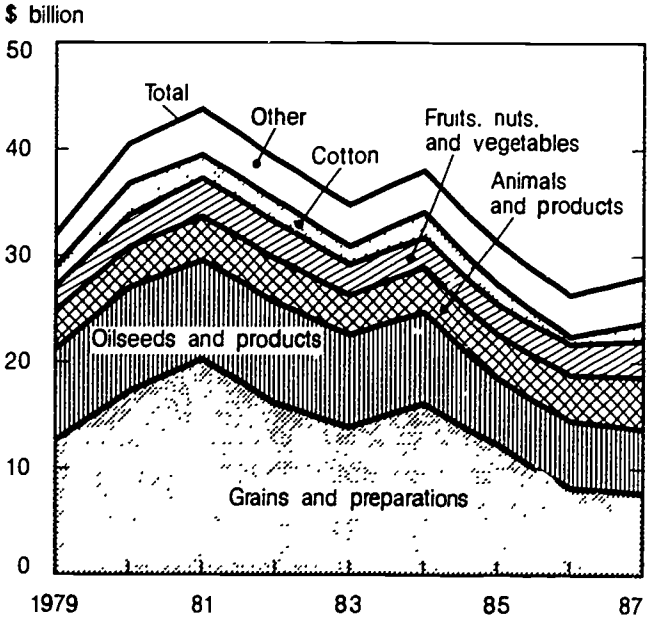
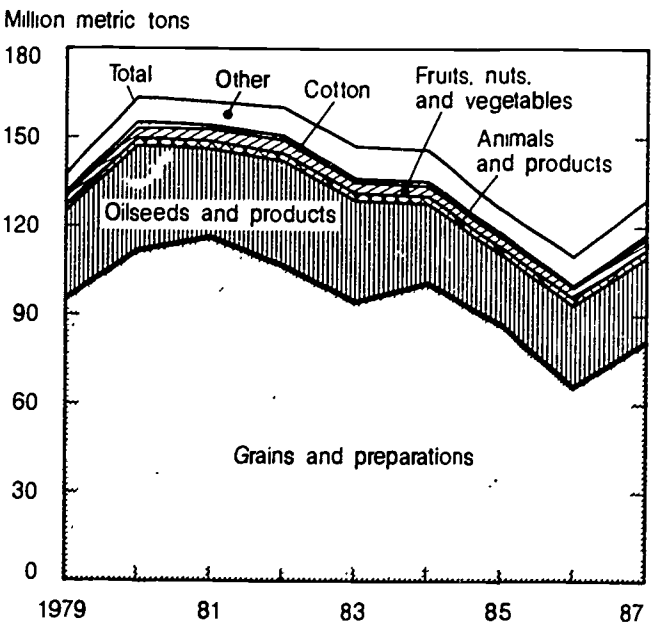


Chart 165
Volume of U.S. Agricultural Exports by Commodity

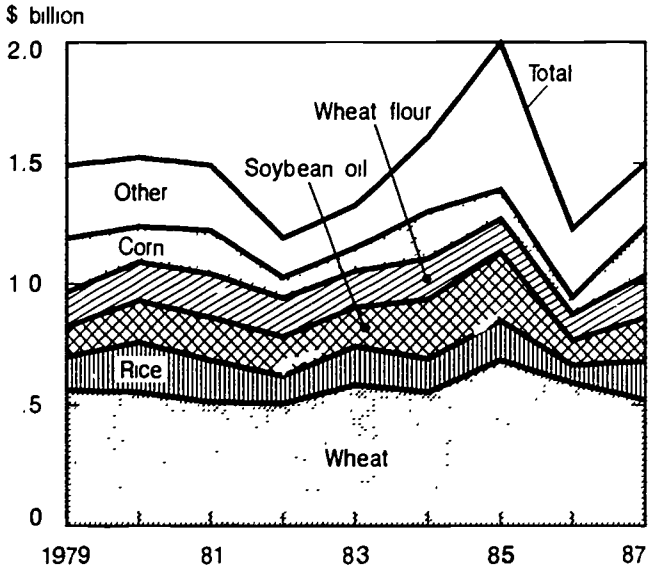


U.S. Trade

U.S. concessional sales reached $1.5 billion in fiscal 1987. Lower prices in fiscal 1987 allowed the recipient countries to buy more food. Exports to Asia and Latin America were up 12 and 4 percent in fiscal 1987, but dropped to their lowest level in 8 years to Africa.

Chart 166

Concessional Export Sales of U.S. Agricultural Products



Other includes corn-soya-milk blend, nonfat dry milk, cornmeal, oilcake and meal cotton and tobacco

Chart 167

U.S. Agricultural Exports to Asia

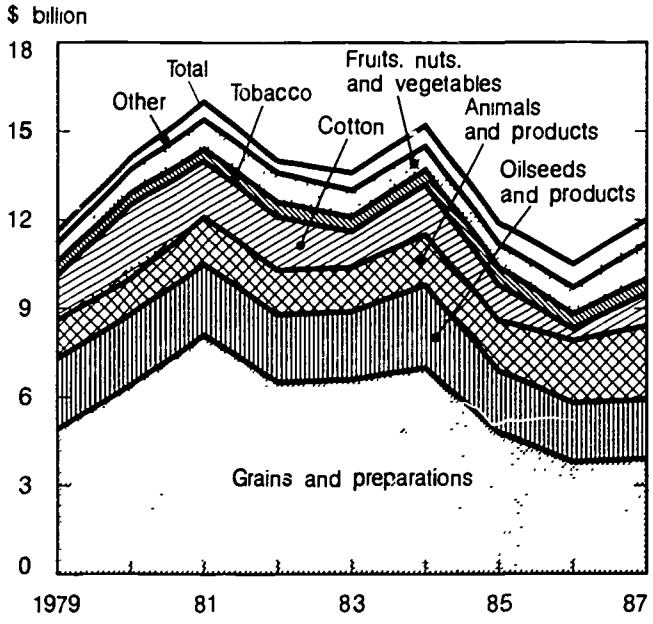


Chart 168

U.S. Agricultural Exports to Africa

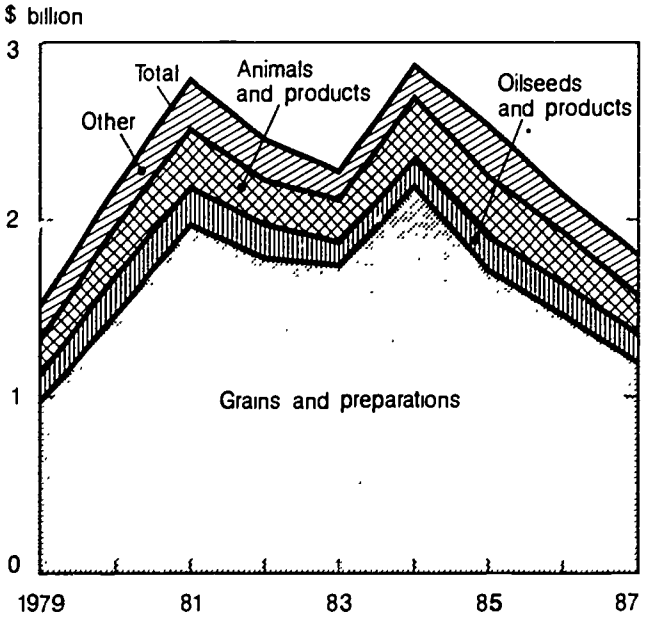
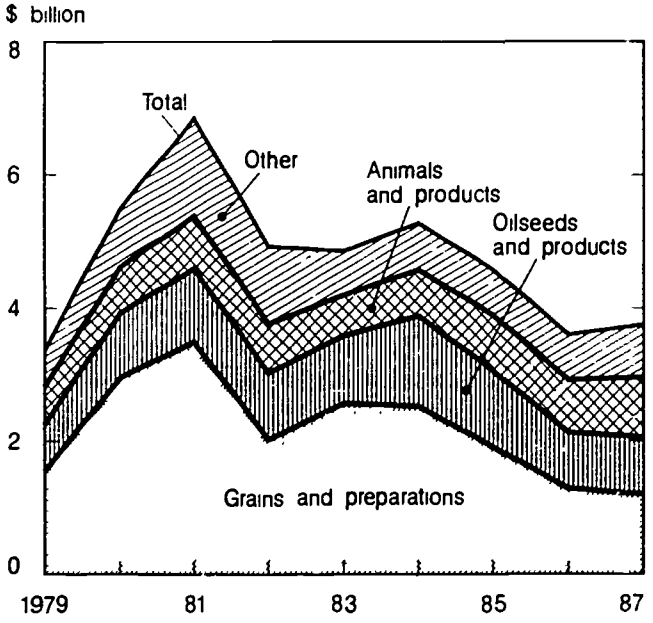


Chart 169

U.S. Agricultural Exports to Latin America

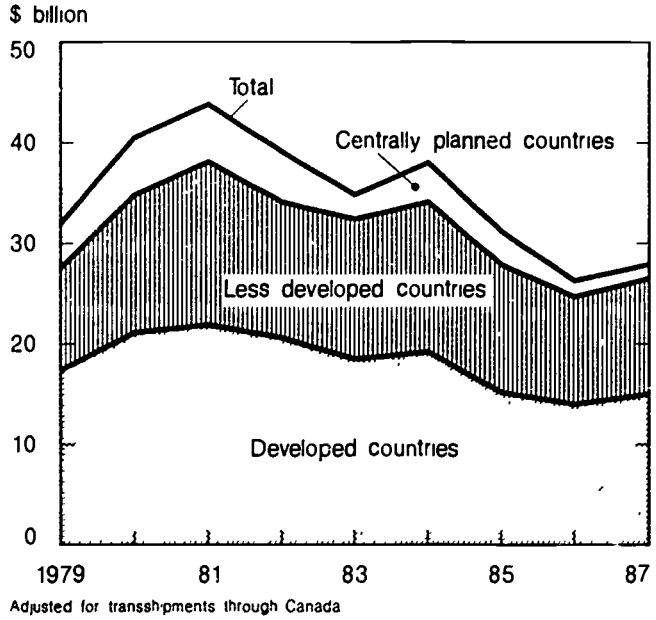


U.S. Trade

The value of U.S. agricultural exports has fallen 74 percent to centrally planned countries, 33 percent to developed countries, and 26 percent to less developed countries since 1981.

Chart 170

U.S. Agricultural Exports to Major Areas



Adjusted for transshipments through Canada

Chart 171

U.S. Agricultural Exports to Centrally Planned Countries

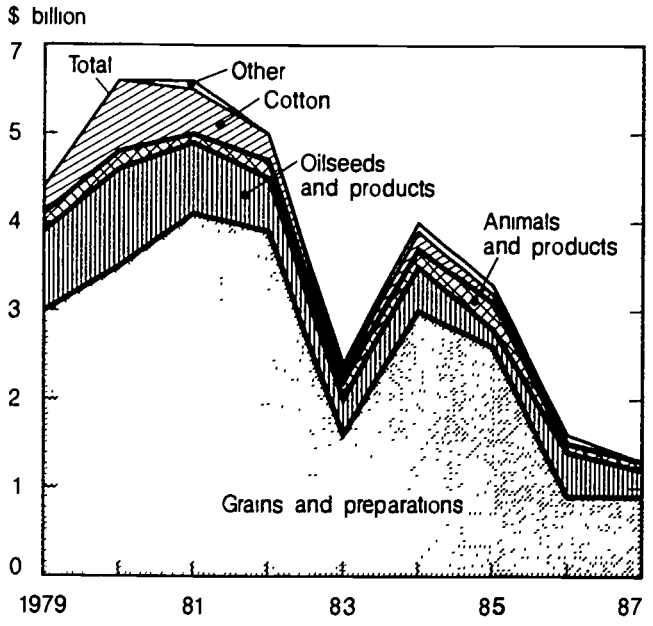


Chart 172

U.S. Agricultural Exports to Less Developed Countries

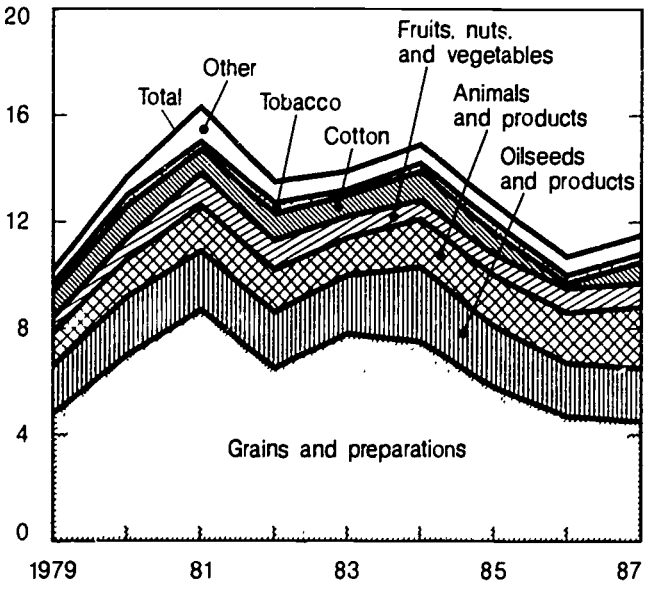
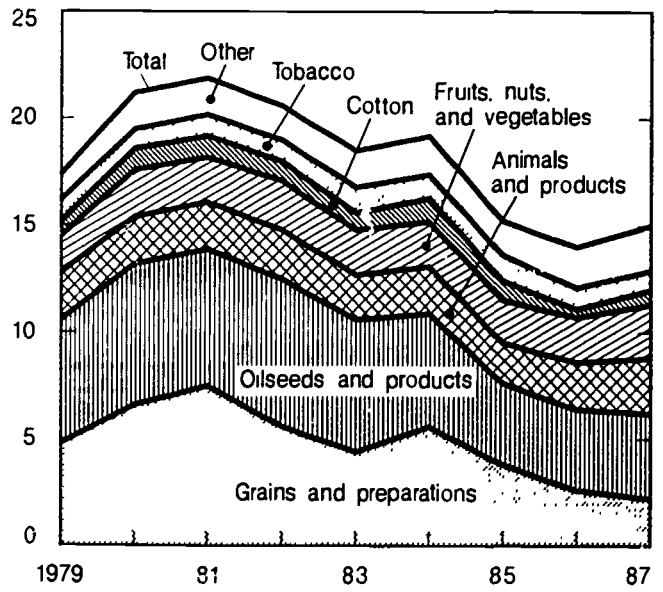


Chart 173

U.S. Agricultural Exports to Developed Countries

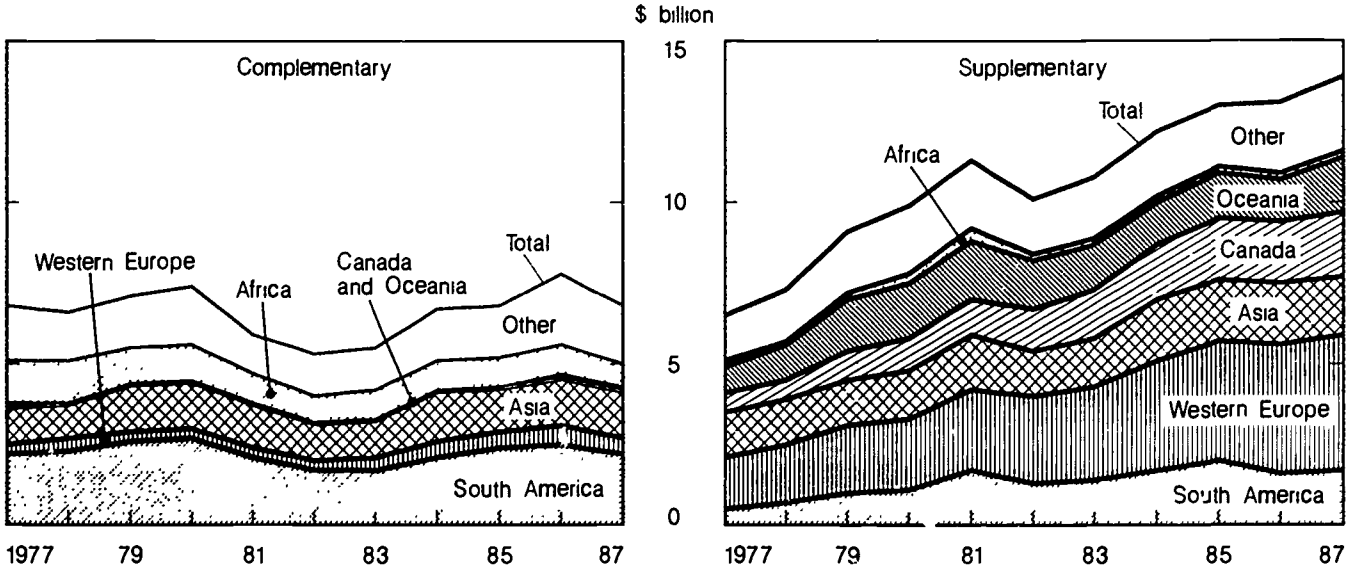


U.S. Trade

Supplementary imports in fiscal 1987 were a record high $13.8 billion, led by unusually high imports of fresh beef and pork and live cattle. Canada, Mexico, Australia, and Brazil were the largest suppliers of these products, with about 40 percent of the total.

Chart 174

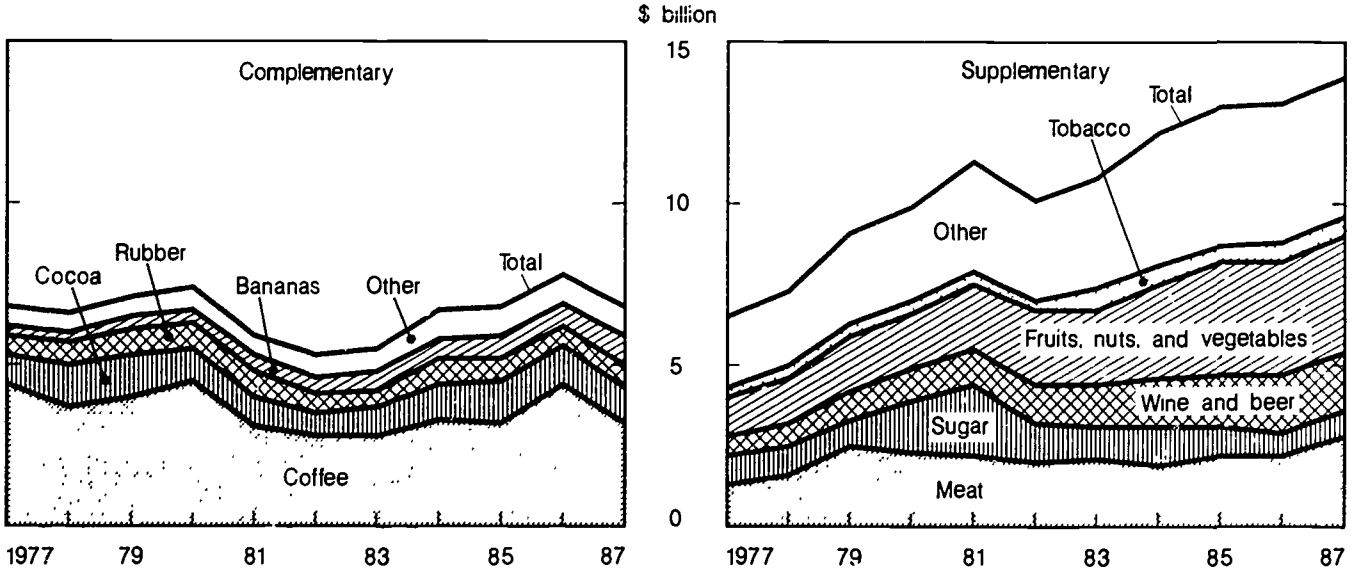
Origin of U.S. Agricultural Imports



Complementary imports are those which do not compete with US agricultural products such as coffee, cocoa and bananas Supplementary imports compete with domestically produced products such as meat and sugar Other includes Eastern Europe, Soviet Union Mexico, Central America and the Caribbean

Chart 175

U.S. Agricultural Imports by Commodity



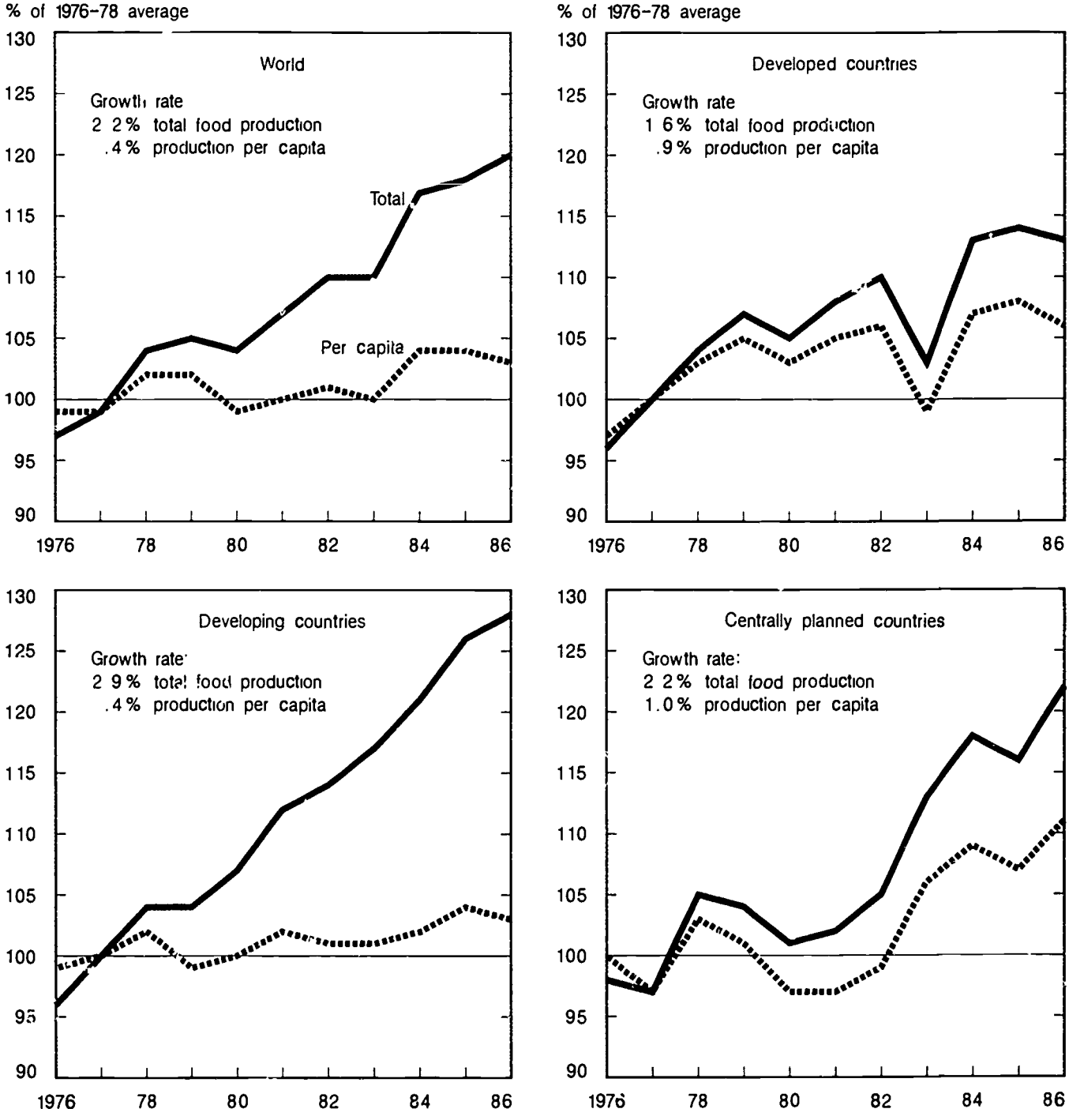
Complementary imports are those which do not compete with US agricultural products, such as coffee cocoa, and bananas Supplementary imports compete with domestically produced products such as meat and sugar

World Production

Subsistence food production in less developed countries barely keeps up with population growth. There is little room for shortages. Much of the food production growth in centrally planned countries is in China.

Chart 176

Changes in World Food Production



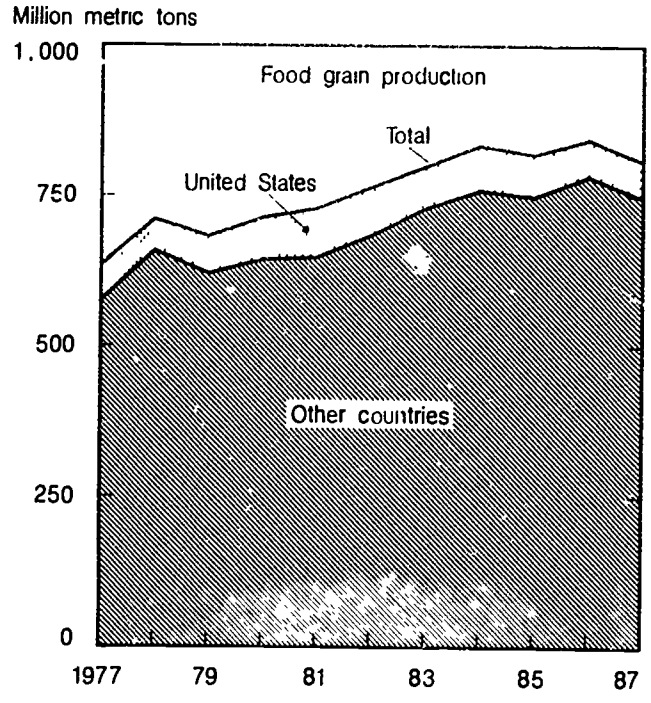
Compound annual growth rates computed for 1976-86

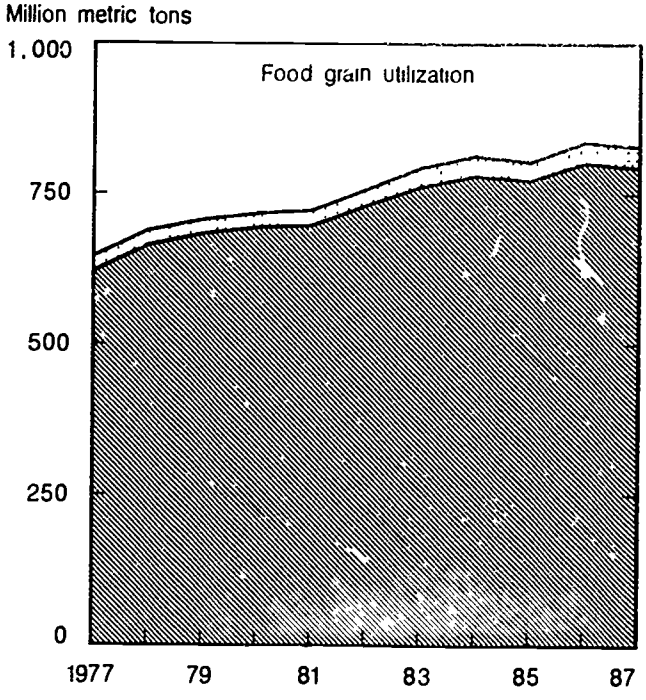
World Production

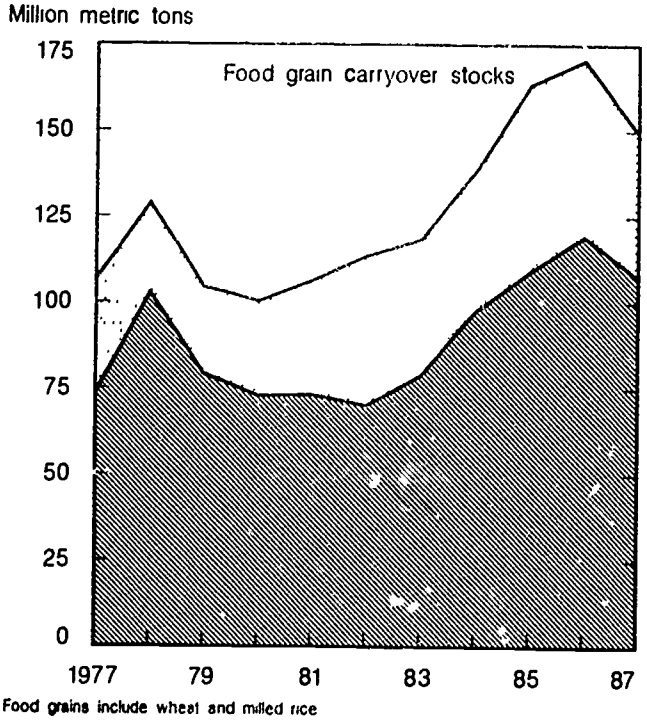
World food grain output fell to its lowest level in 4 years in 1987 The United States accounts for only 8 percent of total world production, but its 30-percent share of global wheat and rice trade plays a major role in determining world price.

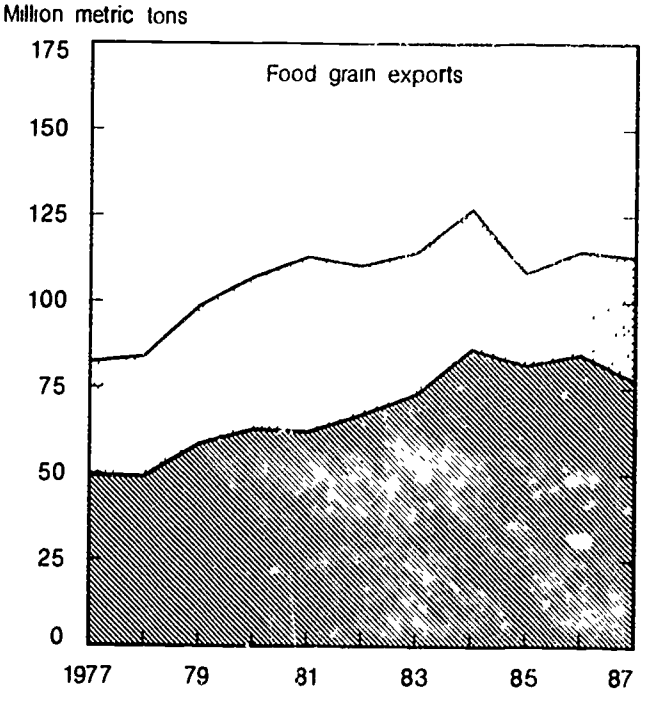
Chart 177

World and U.S. Food Grain Production, Utilization, Carryover, and Exports









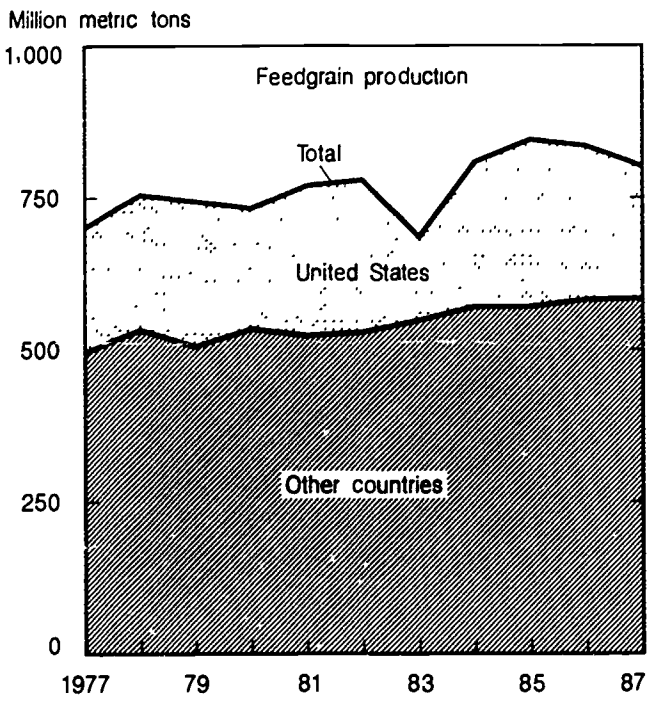
Food grains include wheat and milled rice

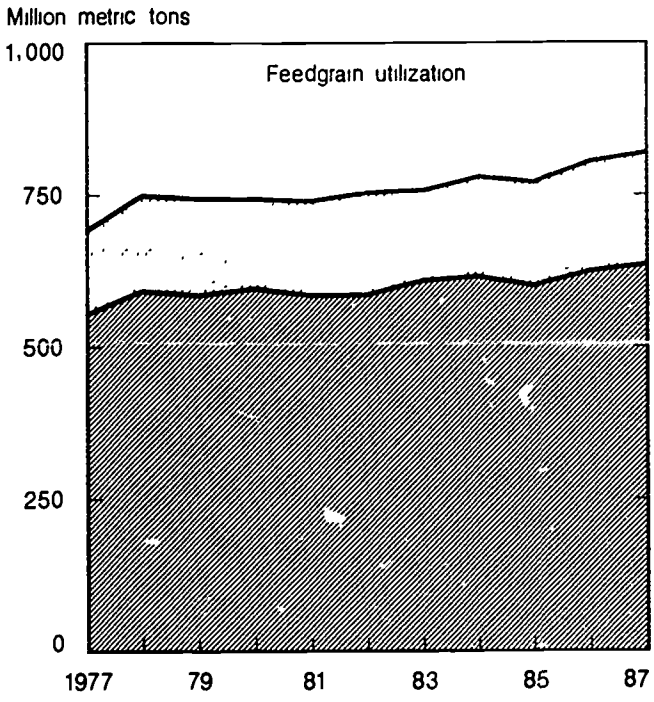
World Production

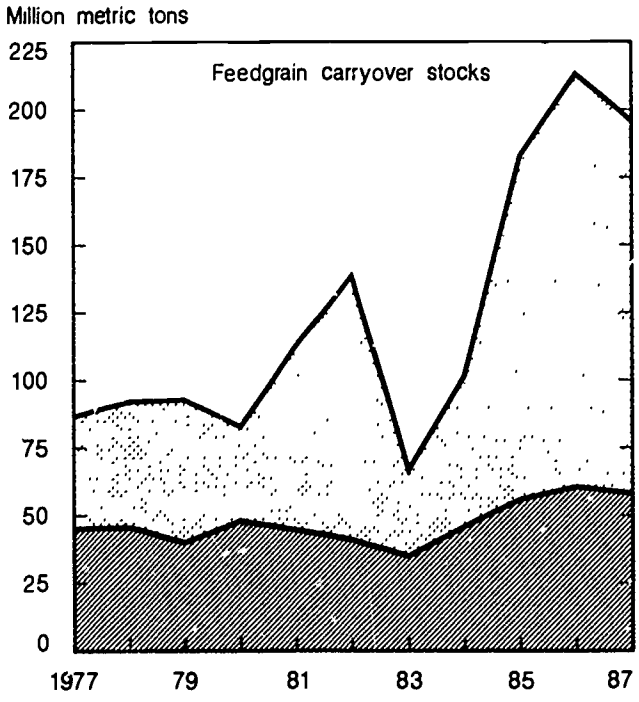
Foreign feedgrain production was a record high 584 million tons in 1987. The United States supplied about half of the nearly 100 million tons traded. Low prices since 1986 have prompted record use.

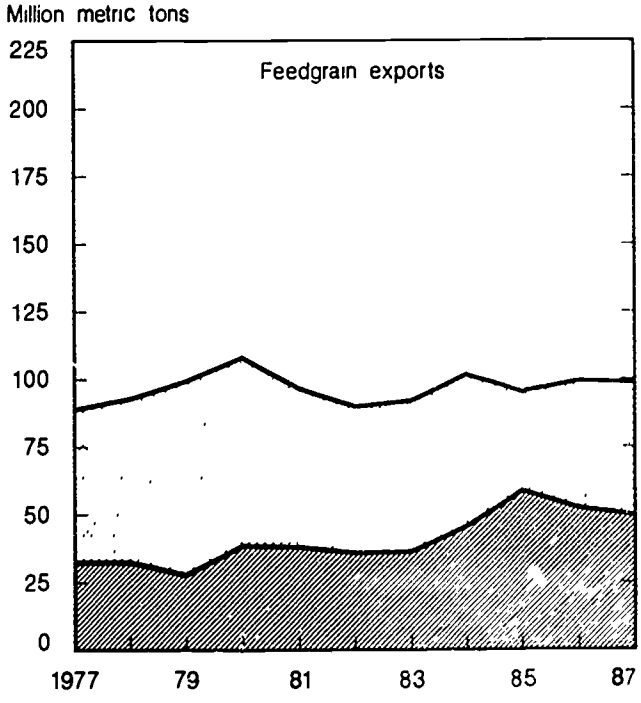
Chart 178

World and U.S. Feedgrain Production, Utilization, Carryover, and Exports







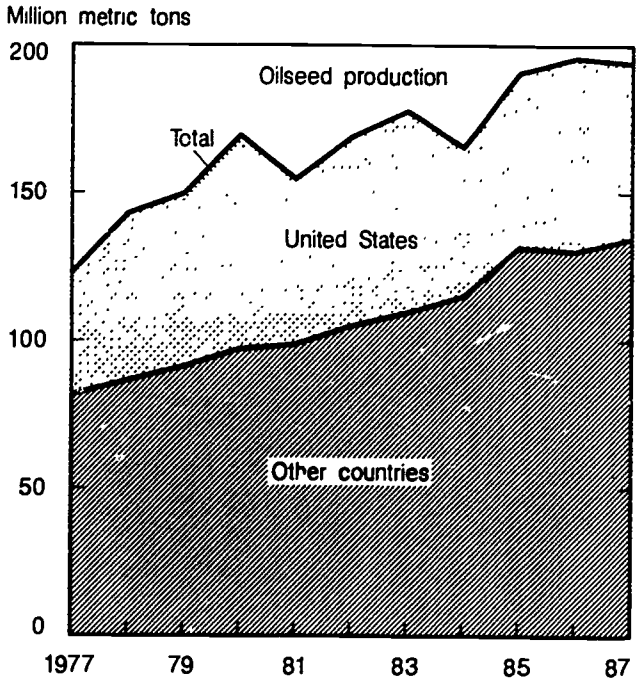


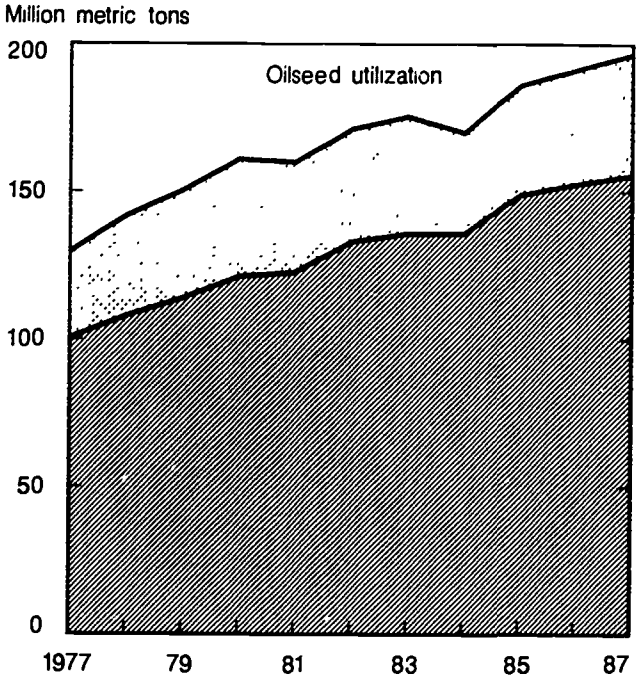
World Production

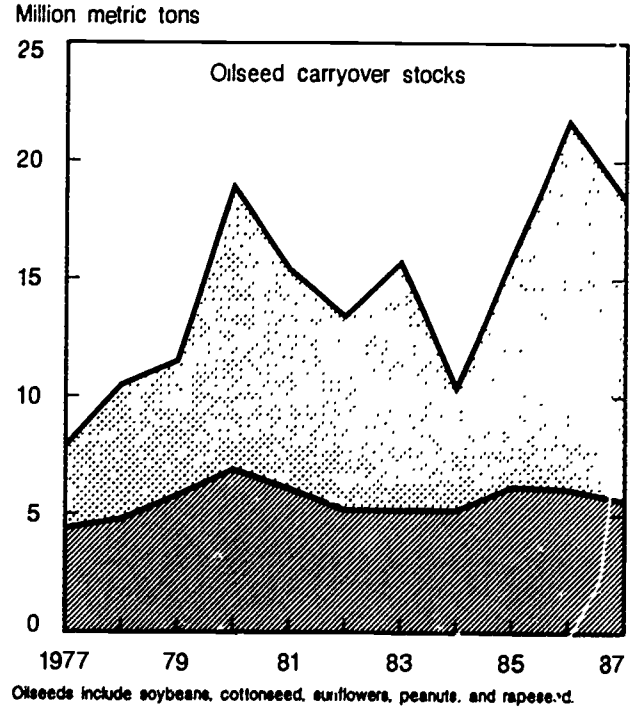
Oilseed production increased at an annual rate of 3.3 percent from 1979-87. Nearly all expansion in production, use, and exports came from outside the United States.

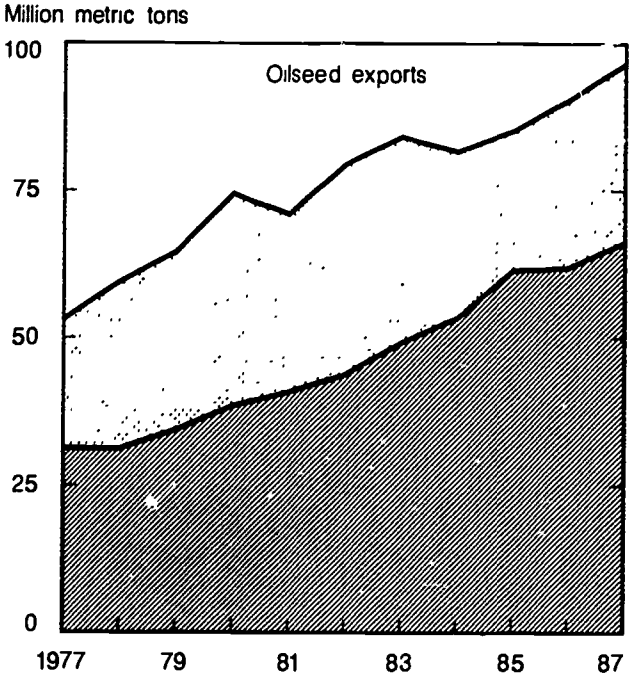
Chart 179

World and U.S. Oilseed Production, Utilization, Carryover, and Exports









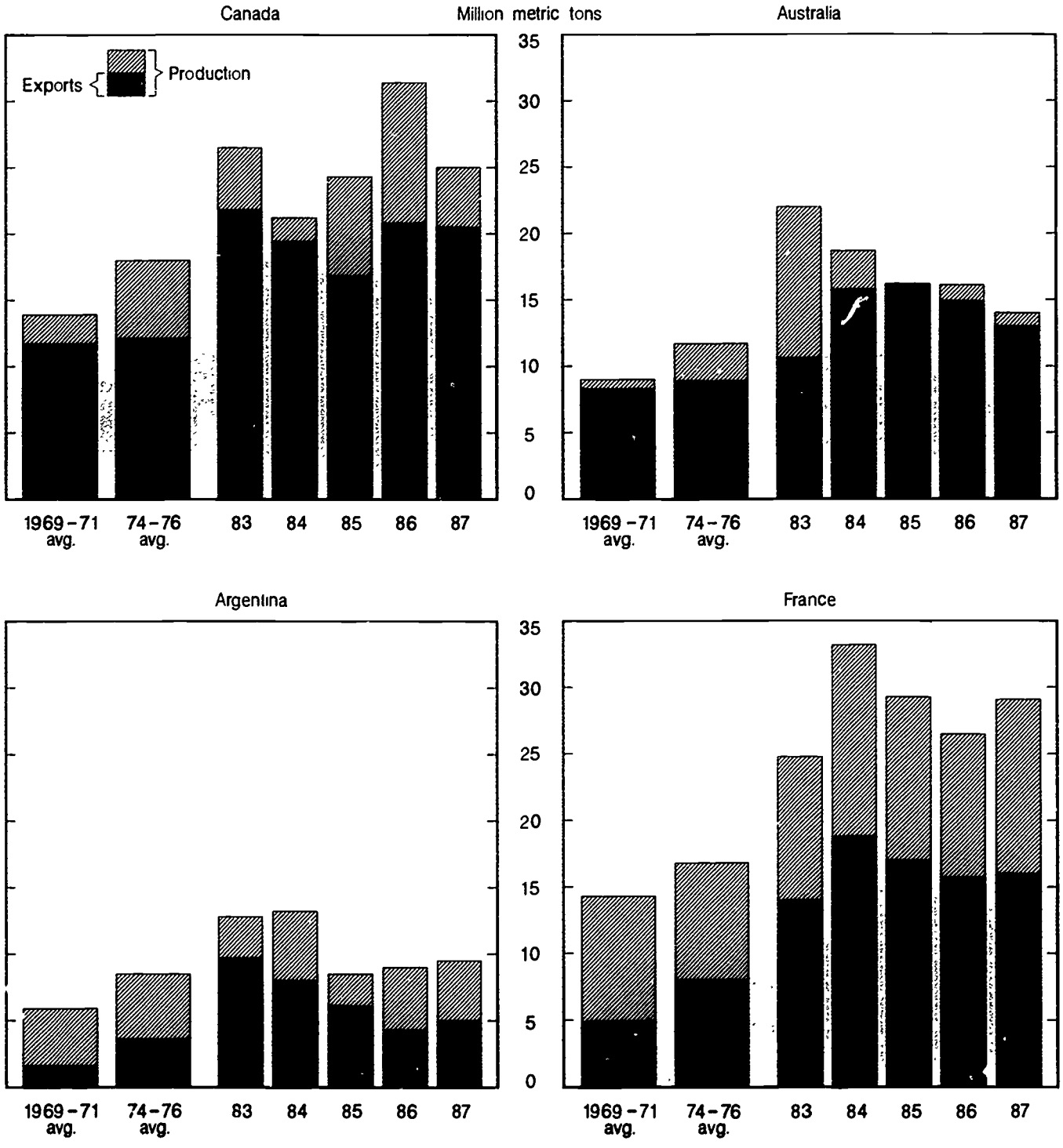
Oilseeds include soybeans, cottonseed, sunflowers, peanuts, and rapeseed.

World Trade

Australia is expected to export 92 percent of its wheat crop in 1987/88, compared with 82 percent for Canada, 55 percent for France, and 53 percent for Argentina.

Chart 180

Wheat Export Competitors: Canada, Australia, Argentina, and France

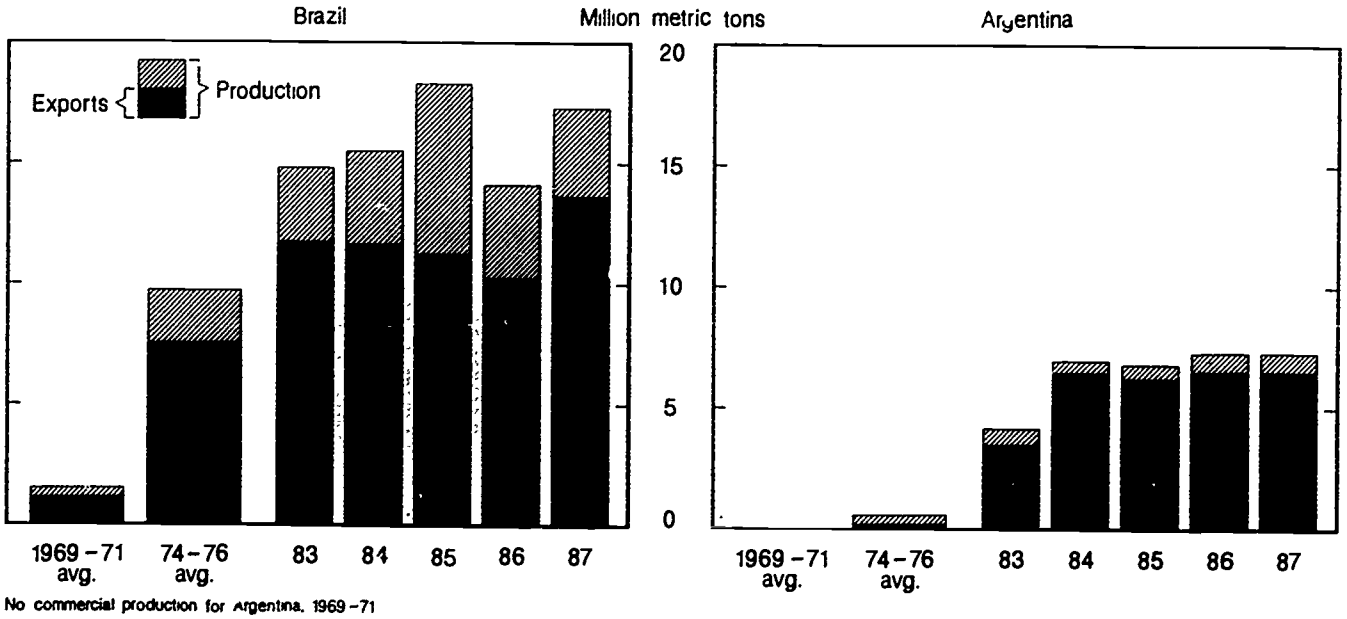


World Trade

Rice exports from Thailand, the leading rice exporter from 1981-86, fell 2 million tons in 1987. About 50 percent of U.S. soybean production was exported during 1983-87, compared with 90 percent for Argentina and 73 percent for Brazil.

Chart 181

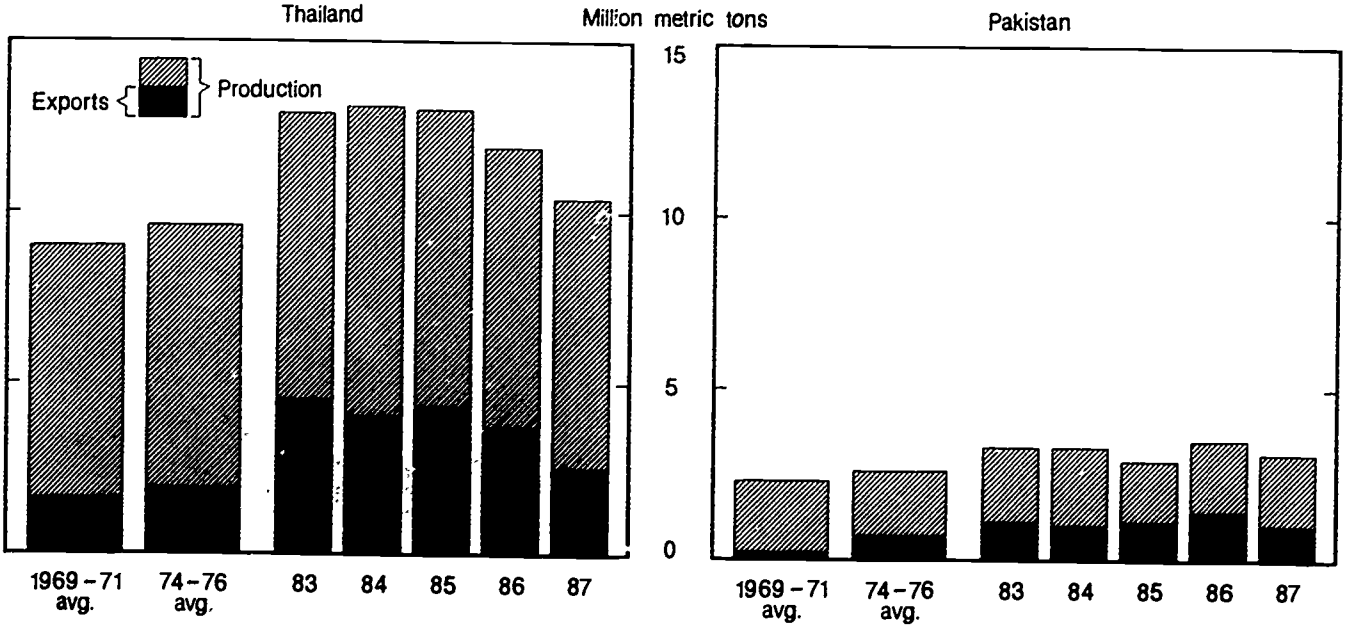
Soybean Export Competitors: Brazil and Argentina



No commercial production for Argentina, 1969 – 71

Chart 182

Rice Export Competitors: Thailand and Pakistan

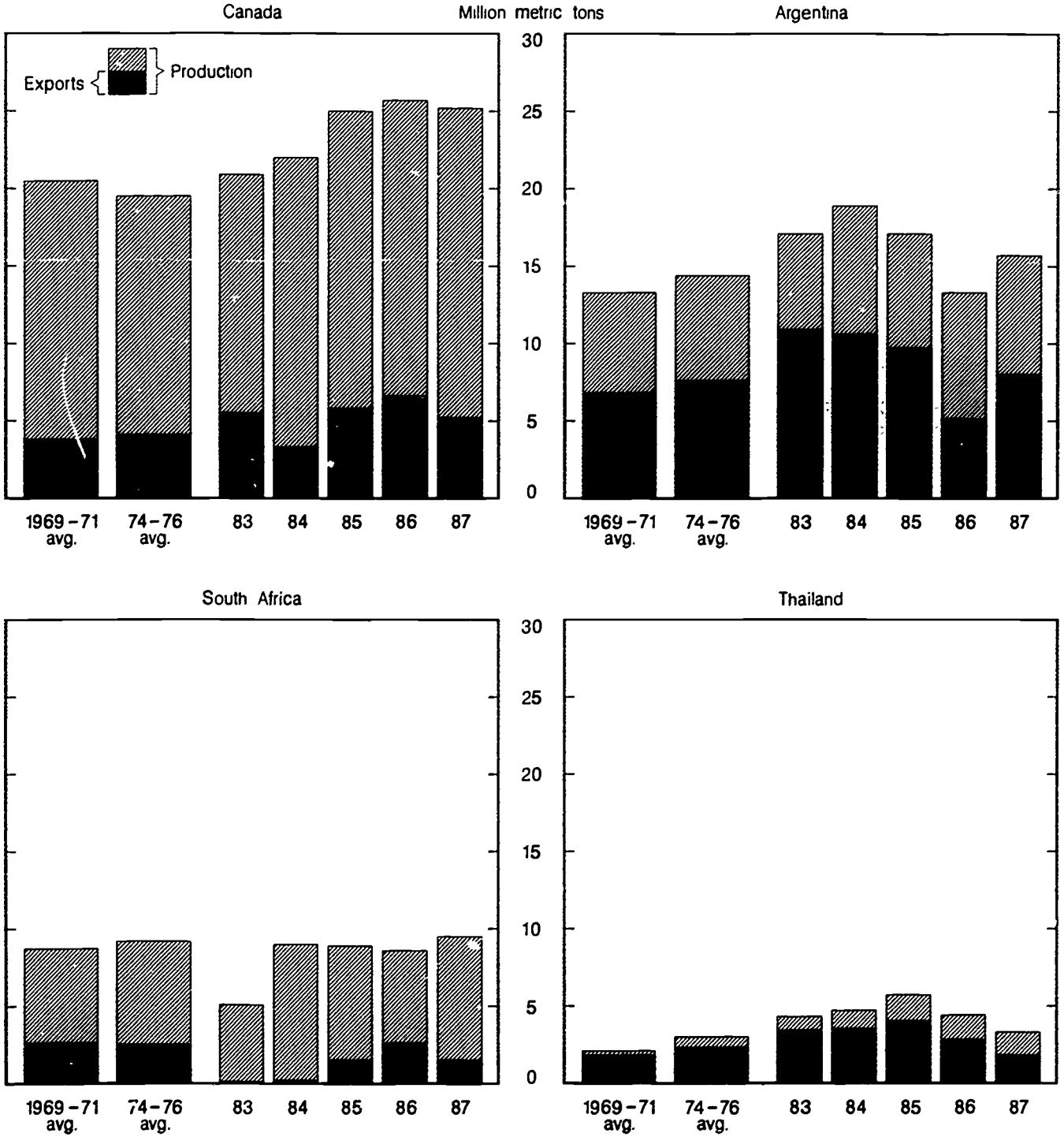


World Trade

Argentina and Thailand are the only major feedgrain producers to export at least half their crop. Both Canada and the United States export around 20 percent of their crop, with U.S. export crops consisting of corn (83 percent), sorghum (11 percent), and barley (6 percent).

Chart 183

Coarse Grain Export Competitors: Canada, Argentina, South Africa, and Thailand



World Trade

Soviet cotton production and exports varied little over the last 5 years compared with Pakistan and the United States. The United States is the largest exporter and importer of tobacco, and imports equalled exports for the first time in fiscal 1987.

Chart 184

Cotton Export Competitors: Soviet Union and Pakistan

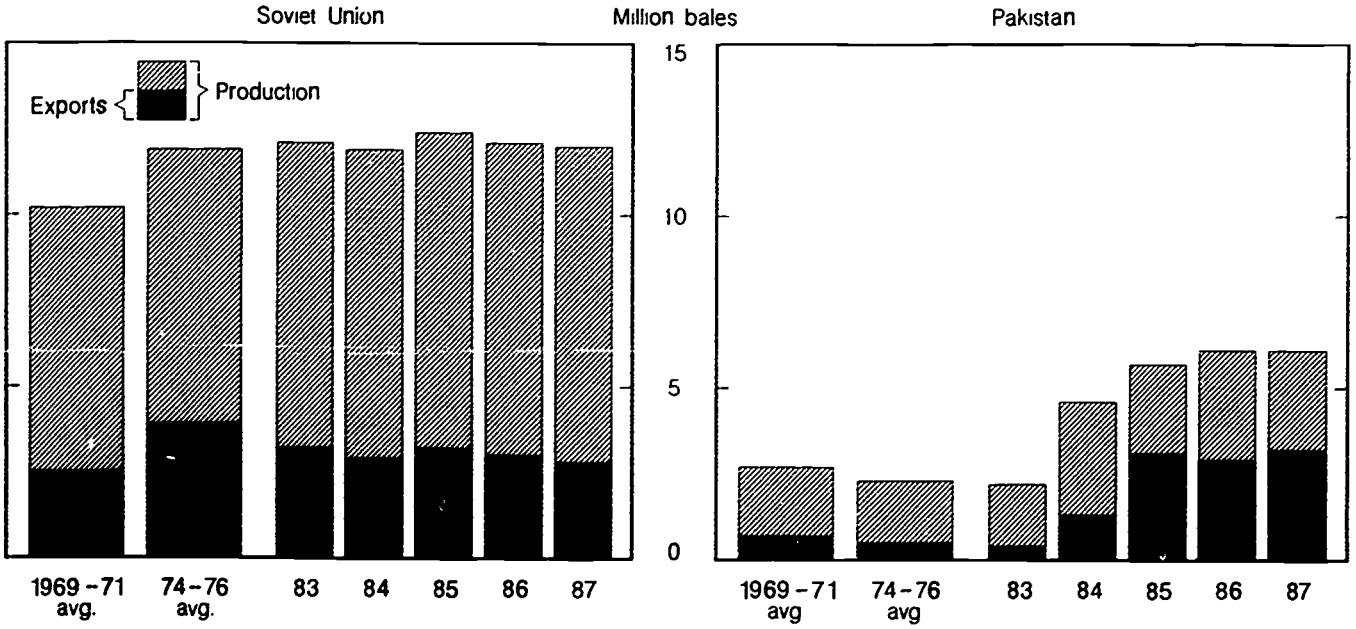
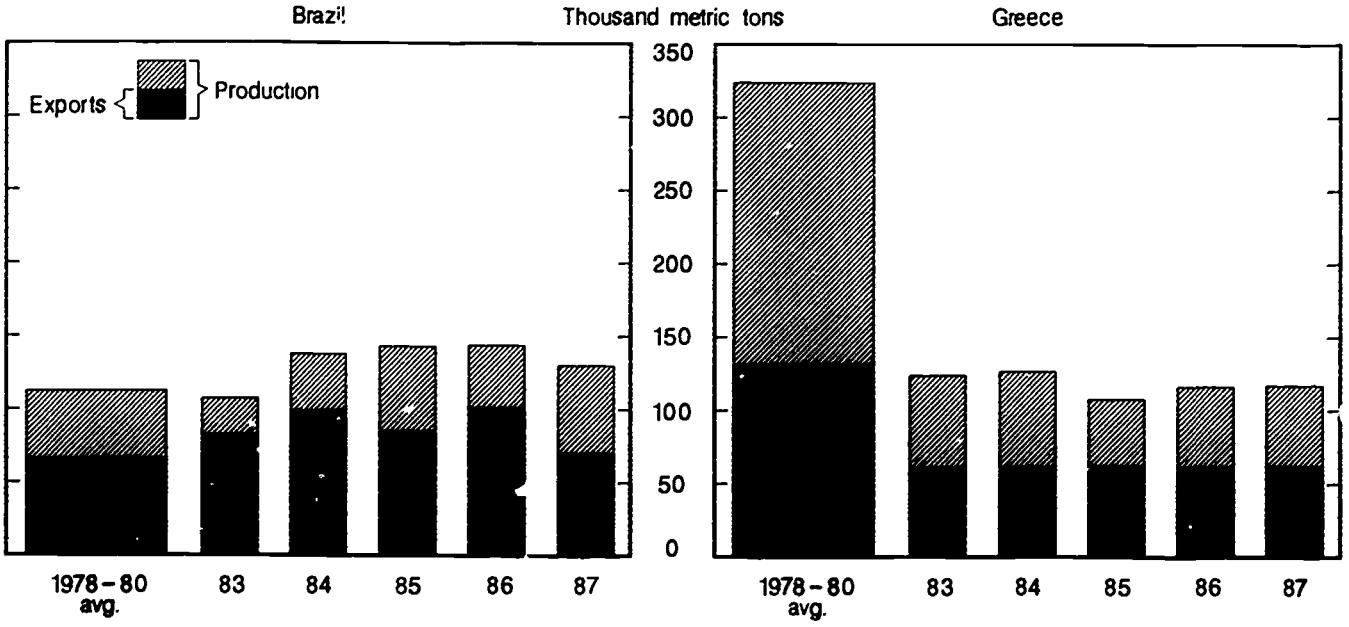


Chart 185

Tobacco Export Competitors: Brazil and Greece

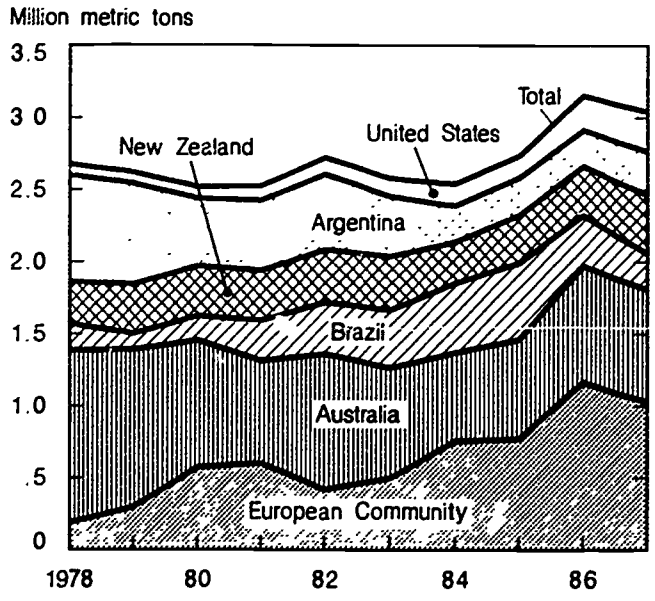


Livestock

Beef and veal exports in major trading countries fell in 1987 to an estimated 3 million metric tons. The number of dairy cows in the United States was cut under the Dairy Termination Program during 1986-87, while the beef cow inventory began to stabilize. Total U.S. cattle numbers fell again in 1987.

Chart 186

Beef and Veal Exports in Major Trading Countries



1987 estimated European Community excludes intra-EC trade

Chart 187

U.S. Exports of Livestock Products

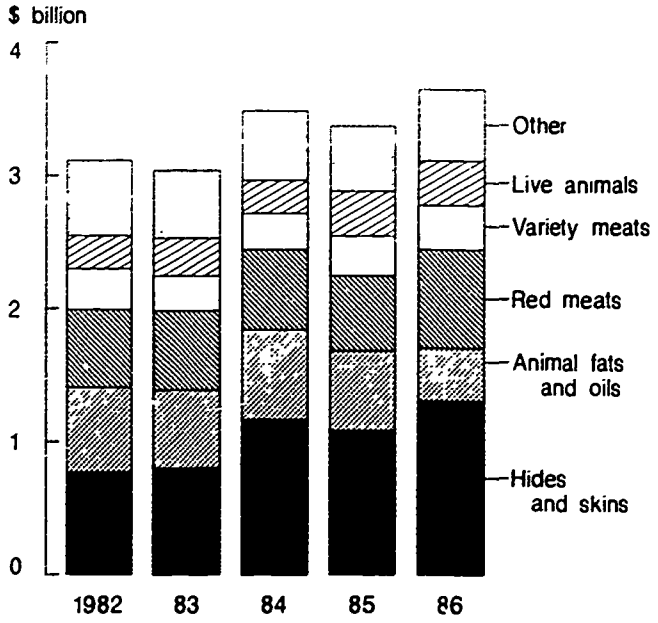
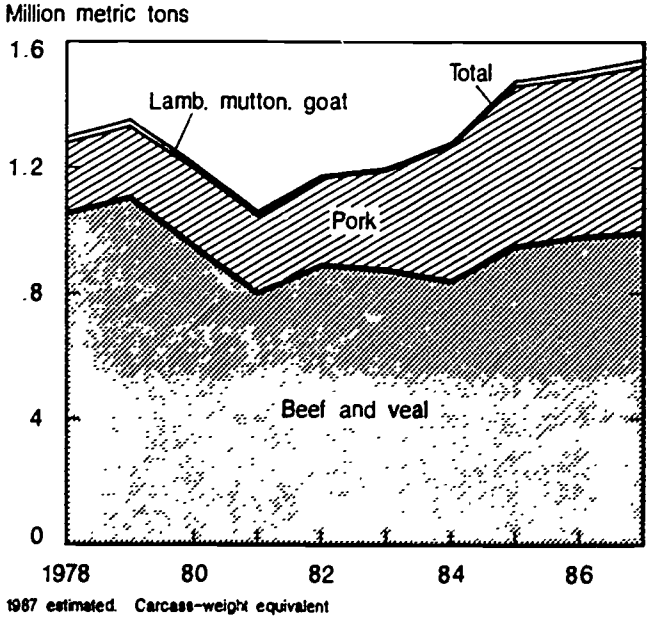


Chart 188

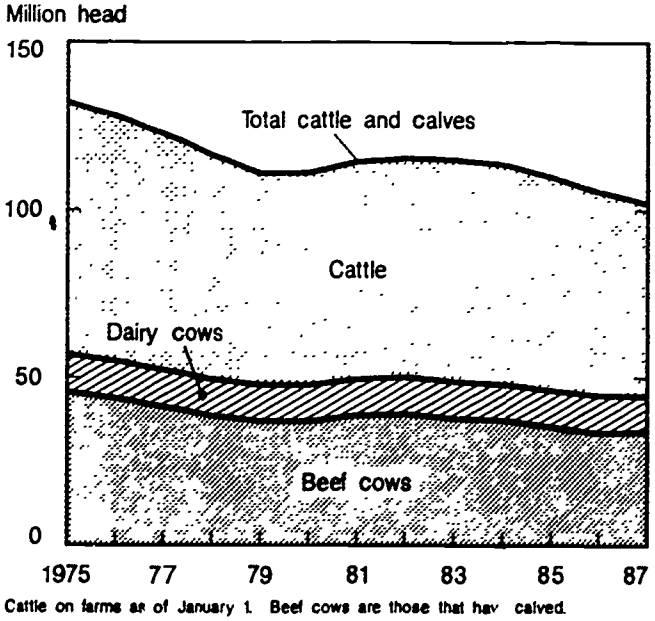
U.S. Imports of Red Meat



1987 estimated. Carcass-weight equivalent

Chart 189

Cattle on Farms



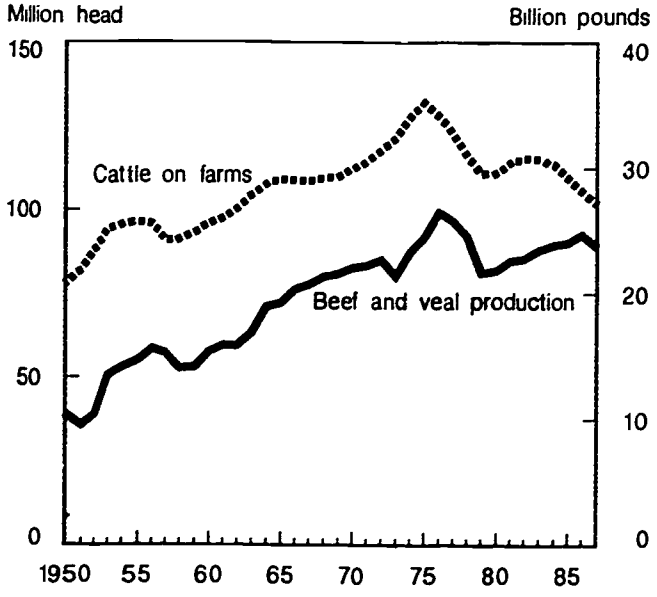
Cattle on farms as of January 1. Beef cows are those that hav calved.

Livestock

Commercial beef production fell 3 percent in 1987. Number of sheep and lambs on farms in January 1987 rose for the first time since 1982, at 10.3 millior. Pig crop rose 7 percent during the first half of 1987.

Chart 190

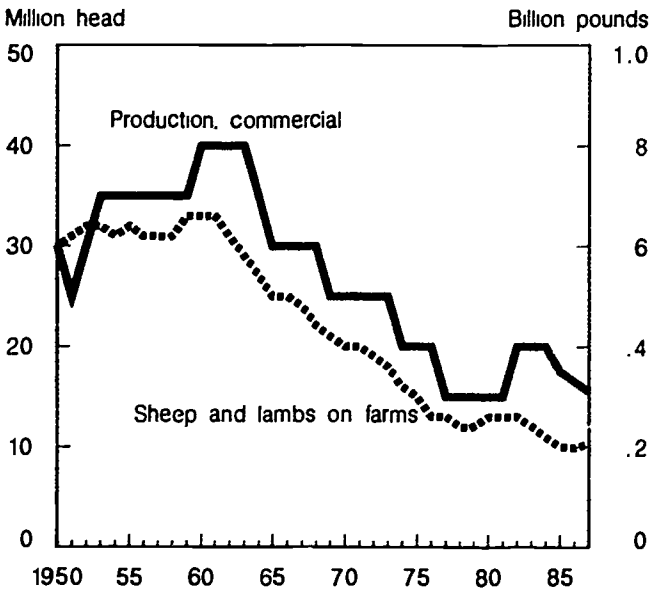
Cattle Numbers and Beef Production



1987 production forecast. Cattle and calves on farms January 1.

Chart 191

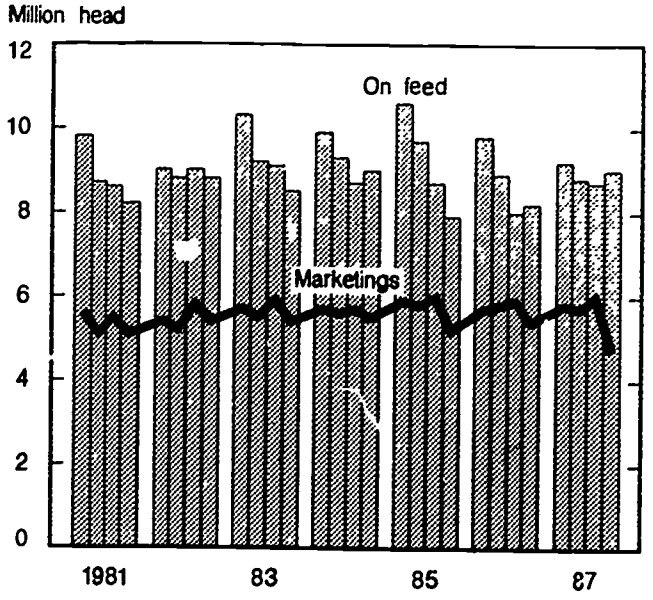
Sheep Numbers, Lamb and Mutton Production



1987 production forecast. Sheep and lambs on farms January 1.

Chart 192

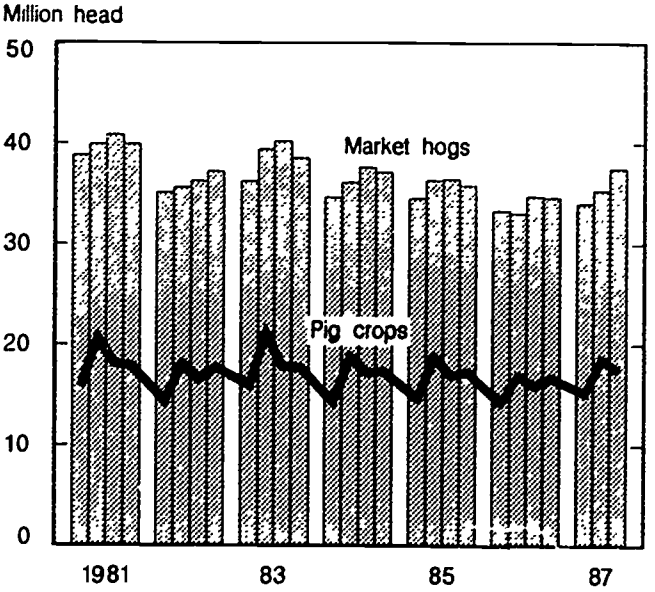
Cattle on Feed and Marketings



Quarterly data for 13 States.

Chart 193

Market Hogs and Pig Crops

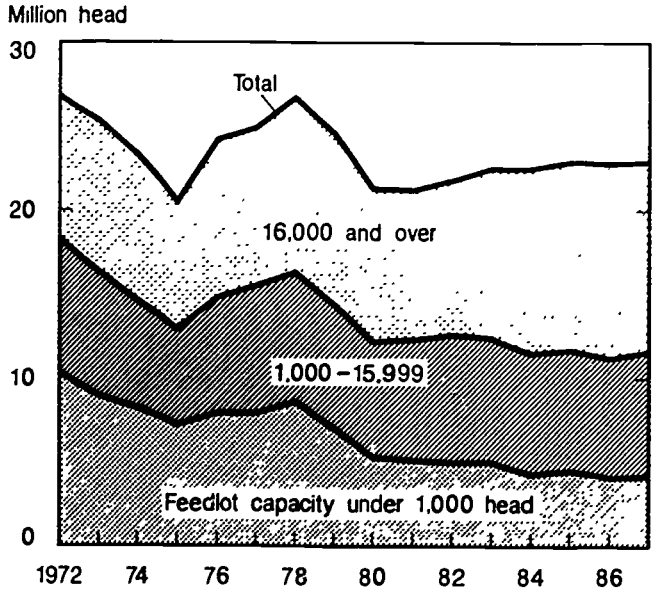


Quarterly data for 10 States.

Livestock

Farm prices for cattle and lambs rose in 1987. Hog prices remained near record highs through the summer, but declined in early fall as supplies rose. Reduced total red meat supplies have resulted in record high pork prices and the highest beef prices since 1982.

Chart 194
Fed Cattle Marketed by Feedlot Capacity



Data are for 13 States.

Chart 195
Livestock Prices Received by Farmers

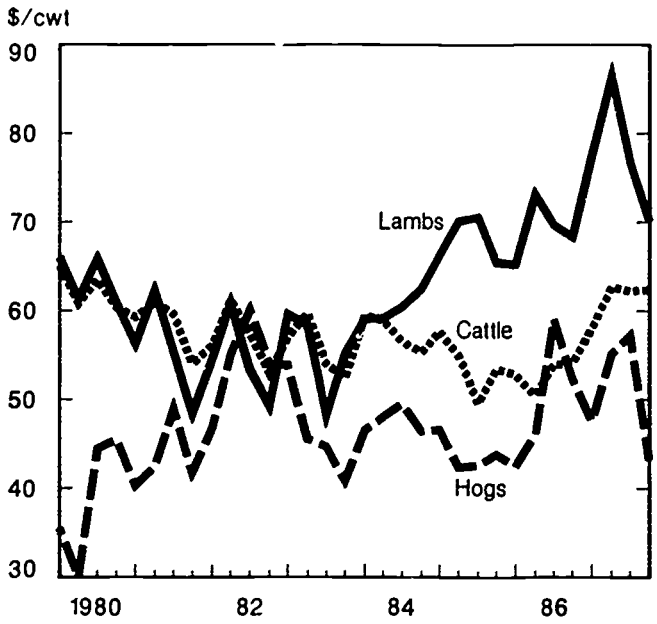
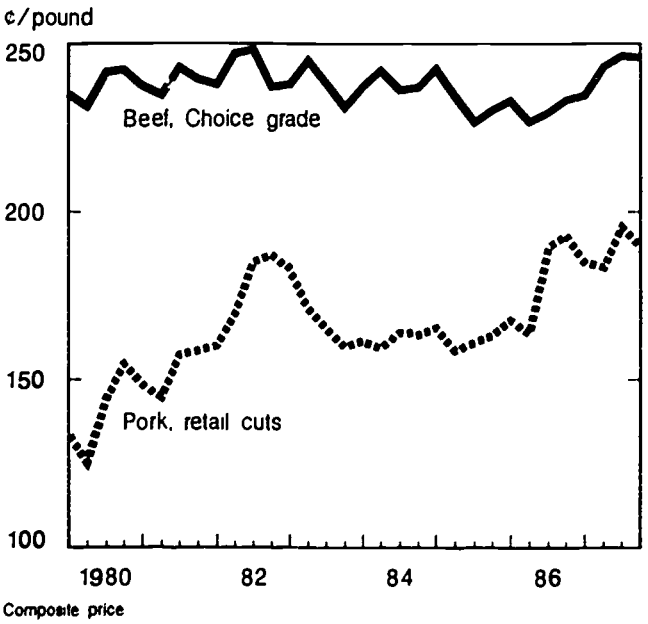
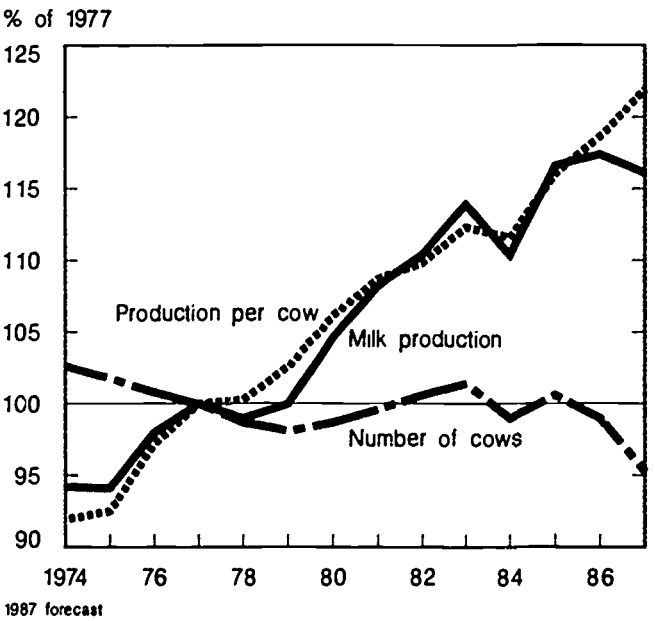


Chart 196
Retail Meat Prices



Composite price

Chart 197
Milk Production, Number of Cows, and Milk per Cow



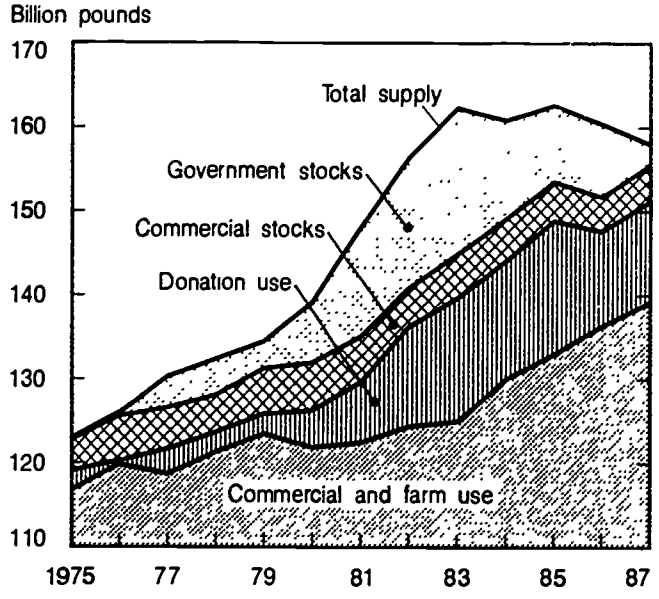
1987 forecast

Dairy

Total 1987 milk production was almost 143 billion pounds, about 3 percent above 1986. Average milk price was $12.54 per cwt in 1987, essentially the same as 1986. Net CCC removals totaled 6.7 billion pounds, compared with almost 11 billion pounds in 1986.

Chart 198

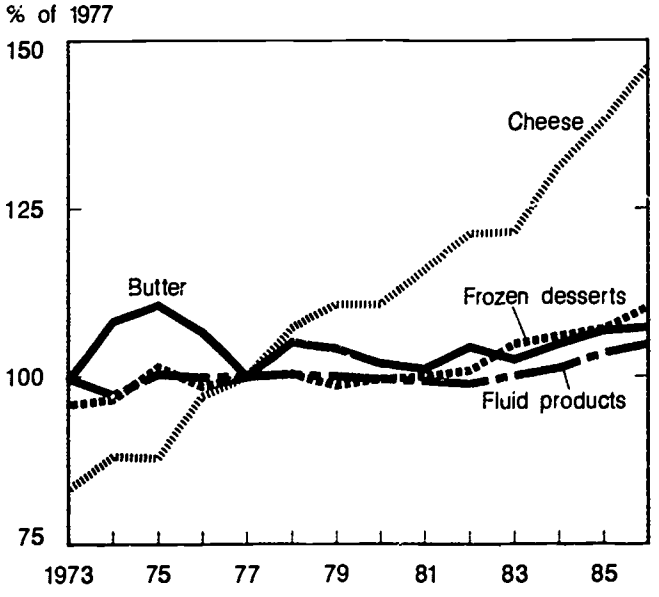
Milk Supply, Use, and Stocks



1987 forecast Stocks as of December 31

Chart 199

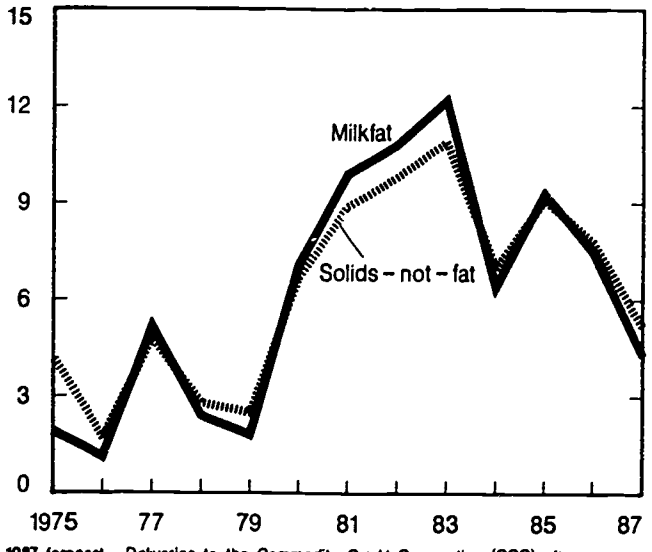
Dairy Product Sales



Fluid products include cream and specialty items. Cheese excludes cottage cheese

Chart 200

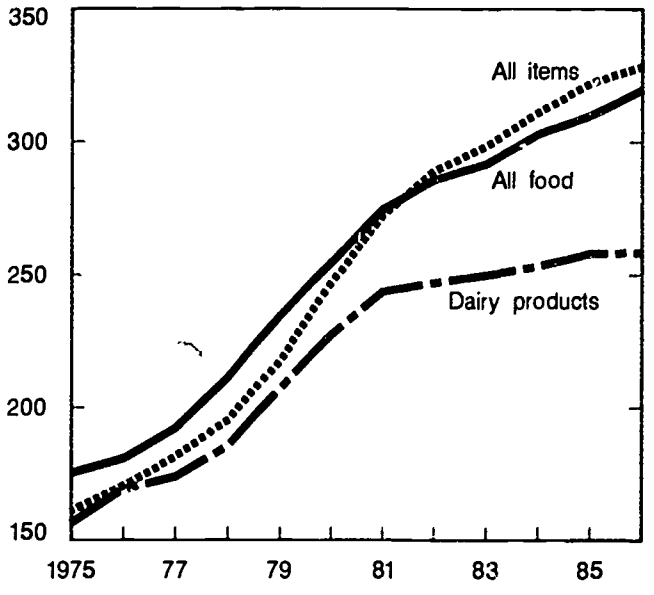
Milk Solids Removed from the Market by CCC Programs



1987 forecast Deliveries to the Commodity Credit Corporation (CCC) after domestic unrestricted sales

Chart 201

Consumer Price Index for Dairy Products, Food, and All Items



Poultry

Egg and broiler exports both rose in 1987, reflecting a weaker dollar, lower U.S. prices, and increased sales through the Export Enhancement Program. Broiler consumption rose over 3 pounds per capita in 1987 while turkey consumption rose almost 2 pounds per capita.

Chart 202

U.S. Exports of Poultry Products

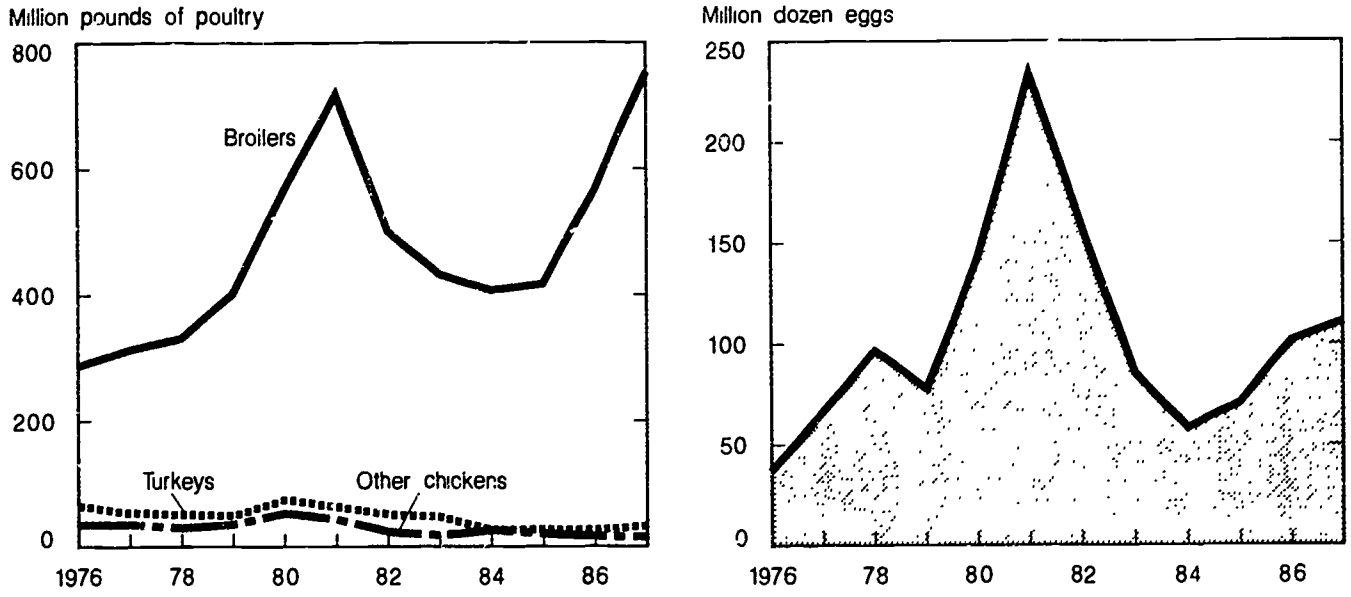
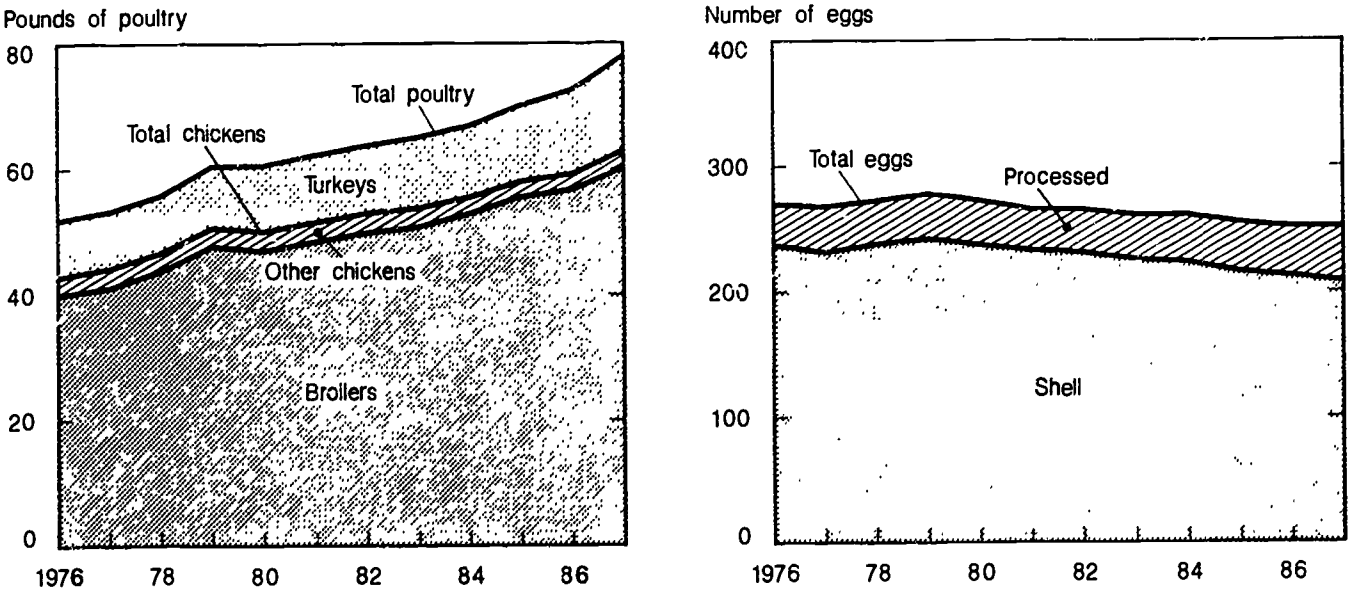


Chart 203

Per Capita Consumption of Poultry and Eggs

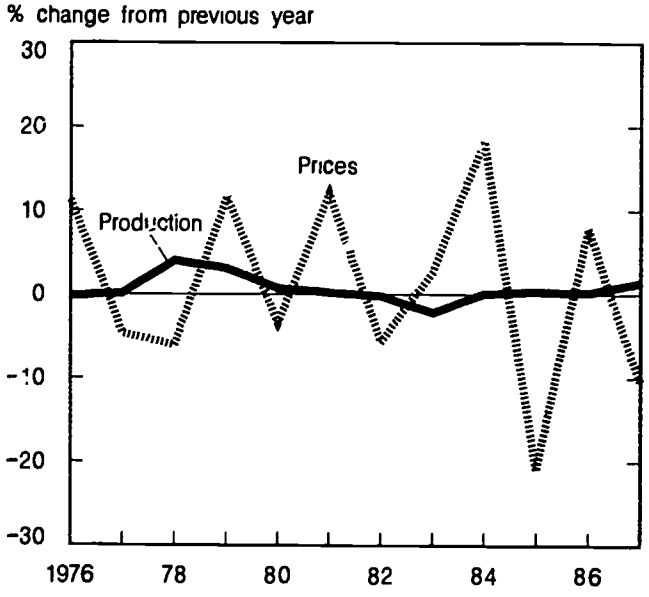


Poultry

Sharp increases in turkey and broiler production in 1987 led to lower prices, even with strong consumer demand and increased exports. Increased egg production and stable demand resulted in lower egg prices.

Chart 204

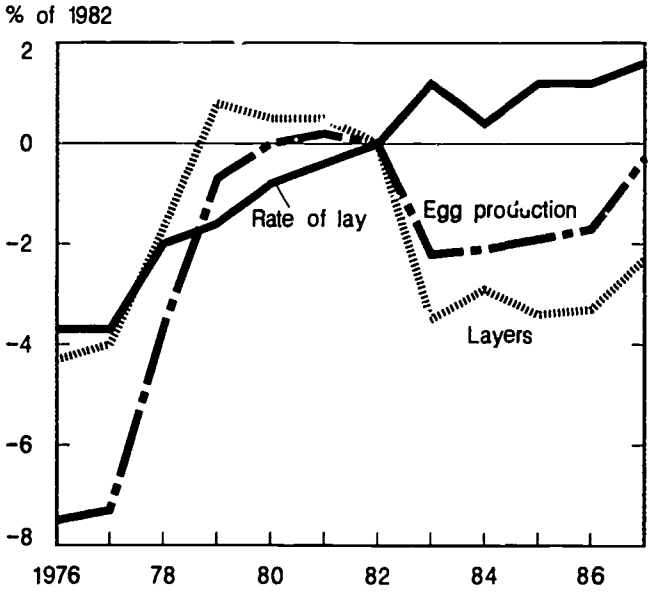
Eggs: Changes in Production and Farm Prices



December 1, previous year, through November 30, current year

Chart 205

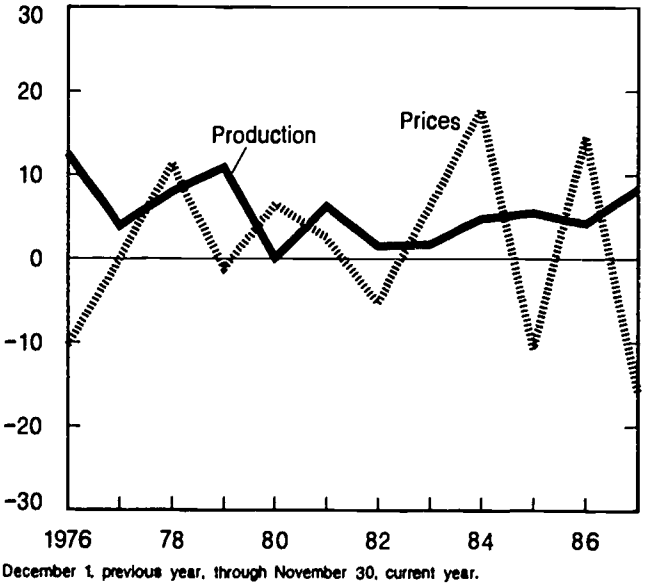
Eggs: Rate of Lay, Production, and Number of Layers



December 1, previous year, through November 30, current year

Chart 206

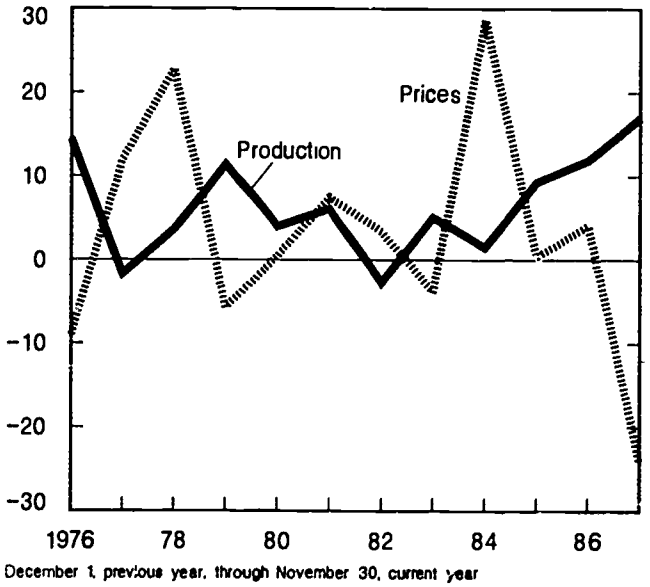
Broilers: Changes in Production and Farm Prices



December 1, previous year, through November 30, current year.

Chart 207

Turkeys: Changes in Production and Farm Prices



December 1, previous year, through November 30, current year

96

Poultry

Sales of young chickens have shifted from whole birds to cut-up parts and further processed products. Further processed chicken products are growing in sales, and the percentage of turkeys cut-up and further processed continues to increase.

Chart 208

Young Chickens: Percentage Cut-Up and Used in Further Processing

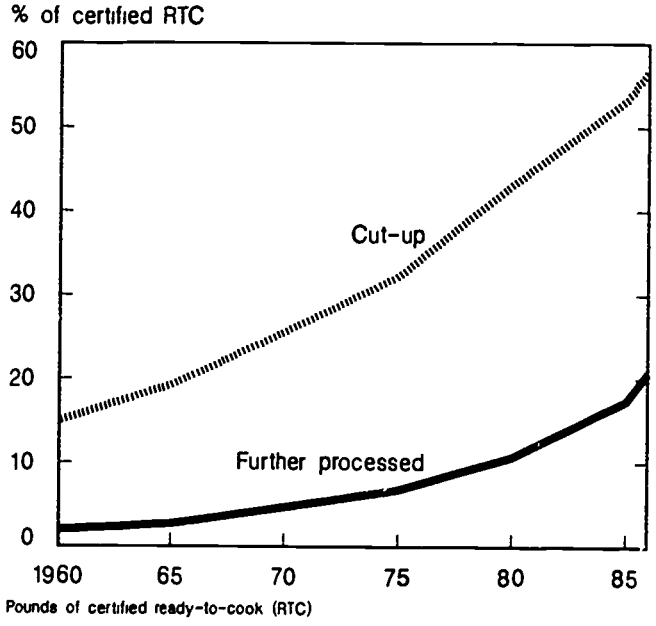


Chart 209

Mature Chickens: Percentage Cut-Up and Used in Further Processing

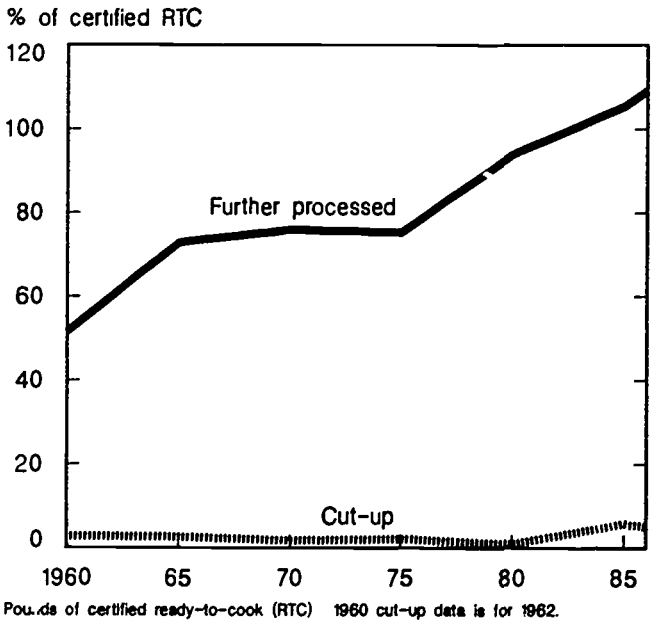


Chart 210

Turkeys: Percentage Cut-Up and Used in Further Processing

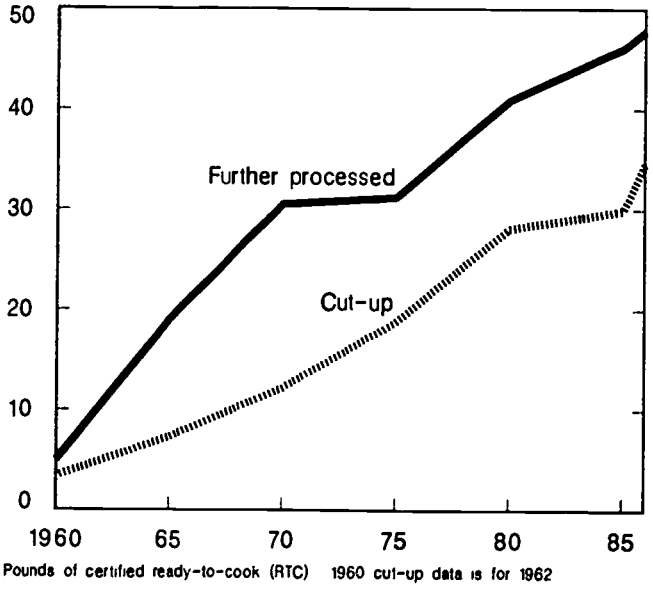
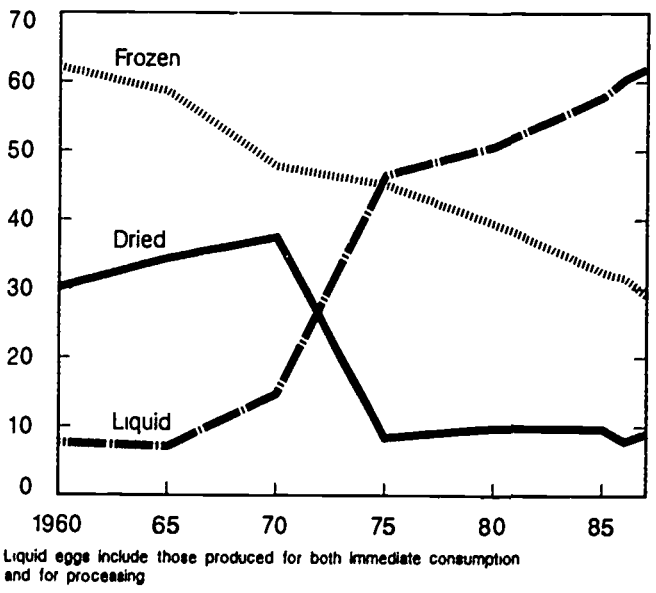


Chart 211

Egg Products: Percentage Frozen, Liquid, and Dried

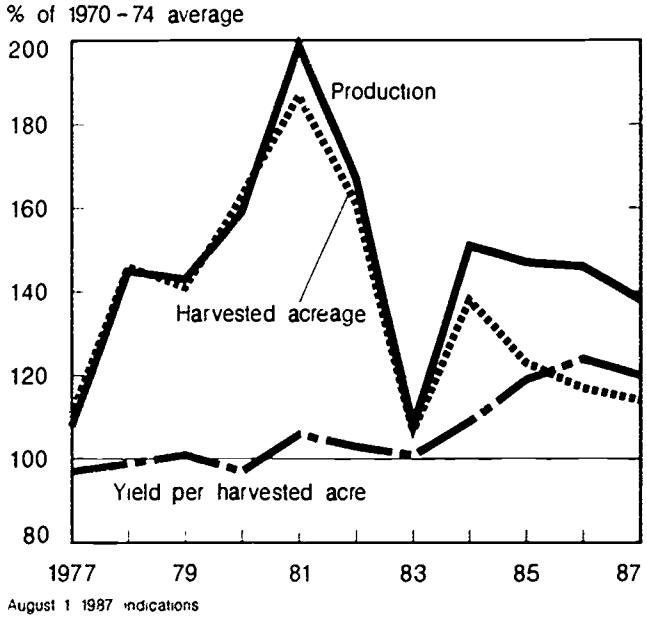


Rice and Other Grains

U.S. rice production, yield, and harvested acreage declined in 1987. World rice production was down 6 million tons from 1986.

Chart 212

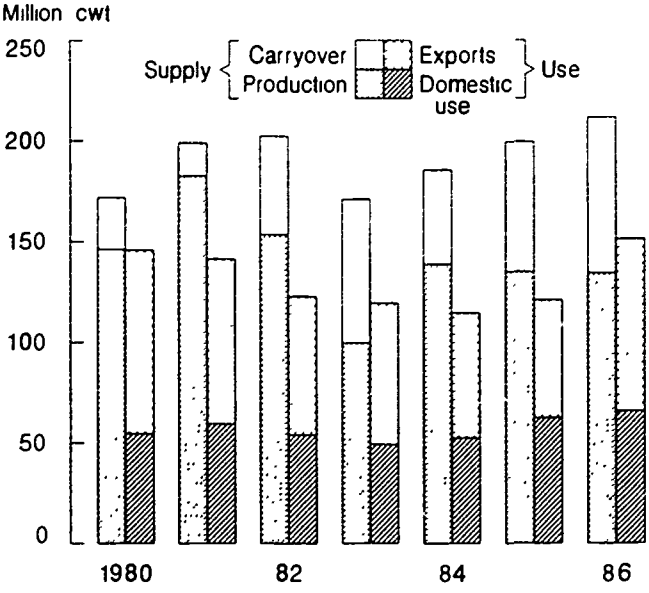
U.S. Rice Acreage, Yield, and Production



August 1 1987 indications

Chart 213

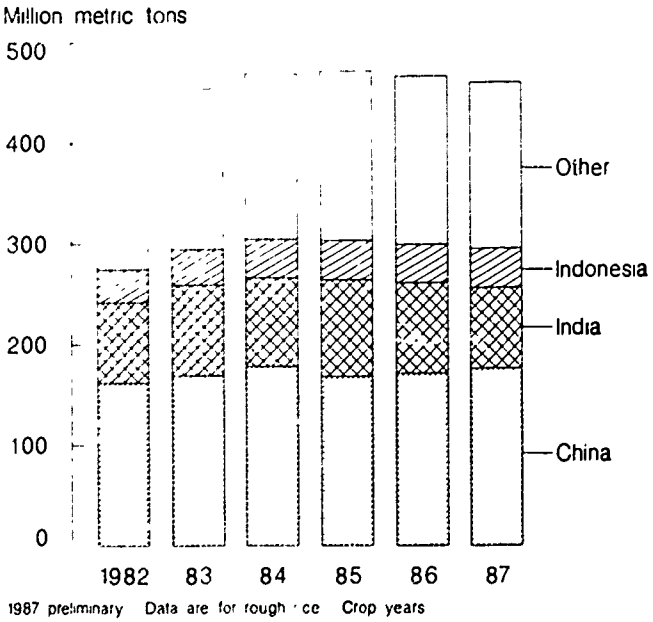
U.S. Rough Rice Supply and Use



Year beginning August 1 Supply includes imports

Chart 214

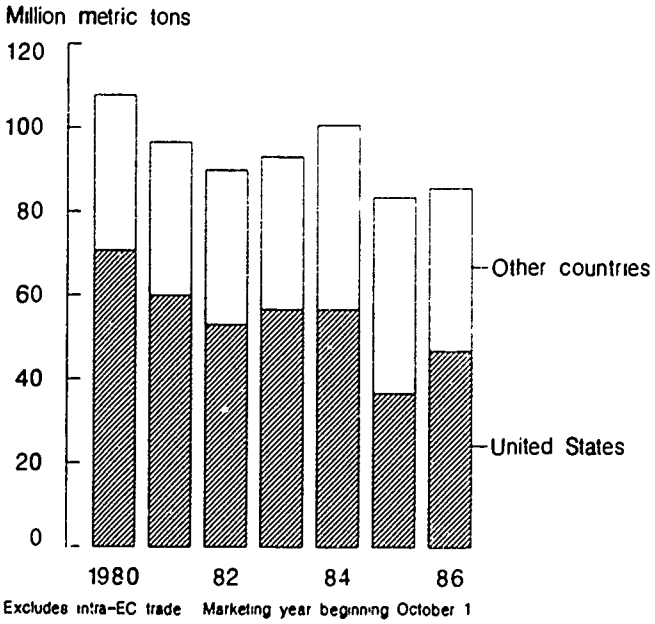
Major Rice Producers



1987 preliminary Data are for rough rice Crop years

Chart 215

World Exports of Coarse Grains



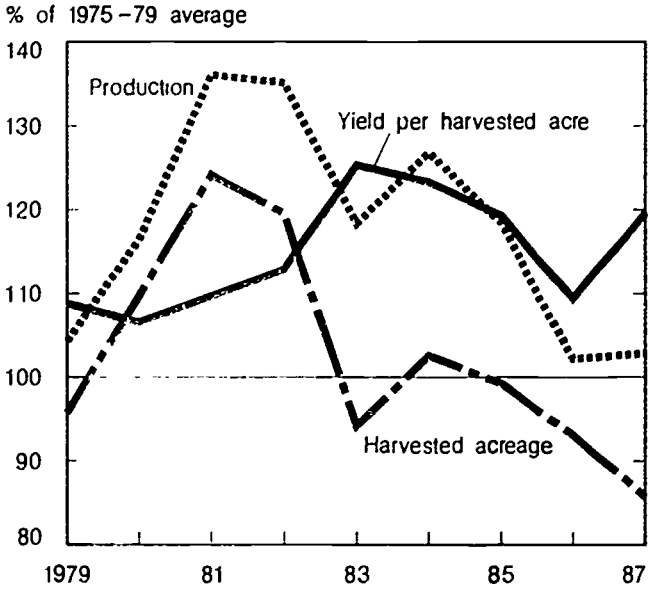
Excludes intra-EC trade Marketing year beginning October 1

Wheat

World wheat use in 1986/87 exceeded production for the second year in a row. Heavy participation in the U.S. acreage reduction program and adverse weather led to declining harvested acreage. World wheat trade rose to 100.2 million tons in 1986/87.

Chart 216

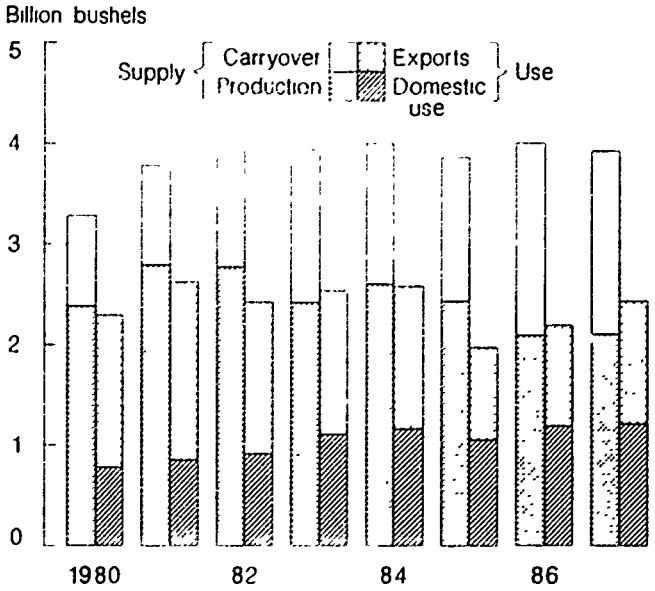
U.S. Wheat Acreage, Yield, and Production



Crop year beginning June 1. September 1, 1986 indications.

Chart 217

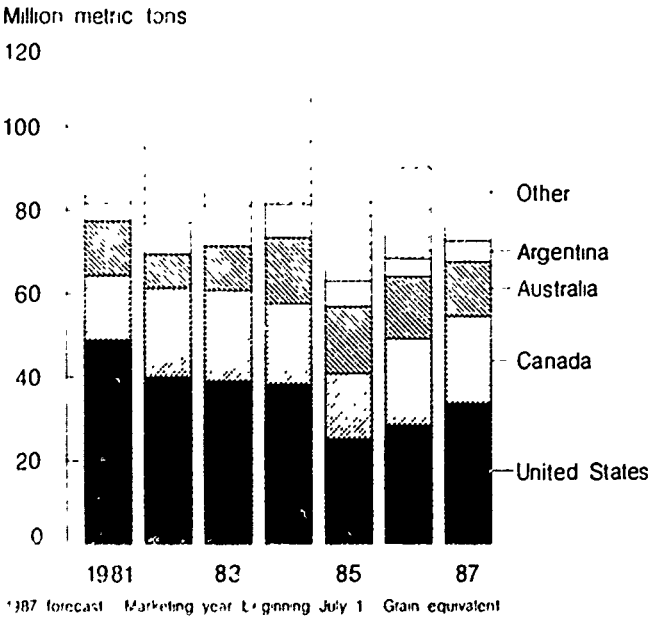
U.S. Wheat Supply and Use



1986 preliminary. 1987 projected. Supply includes imports. Year beginning June 1.

Chart 218

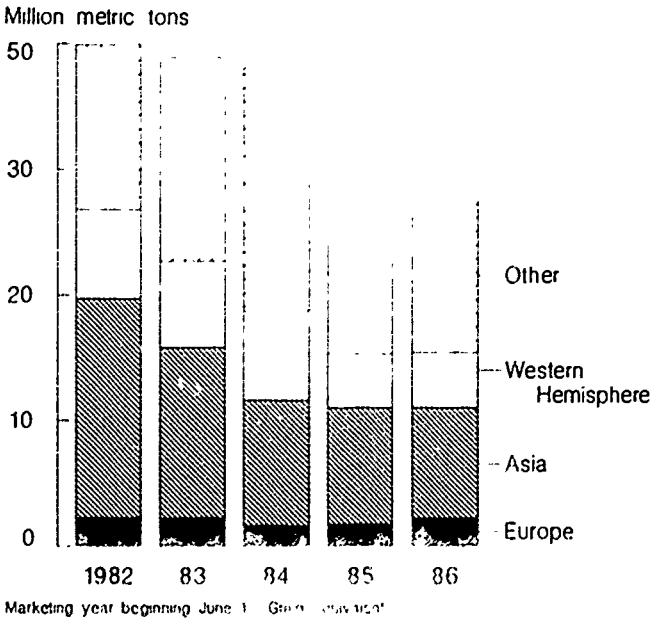
Major Wheat Exporters



1987 forecast. Marketing year beginning July 1. Grain equivalent.

Chart 219

Destination of U.S. Wheat Exports

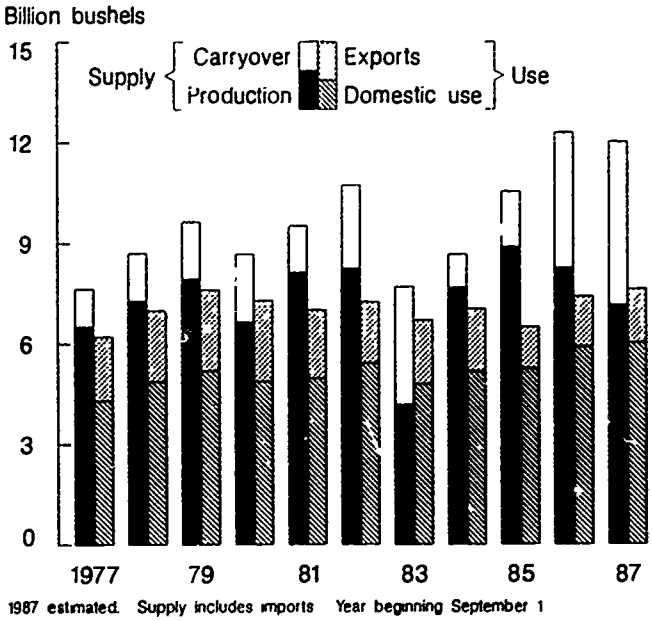


Marketing year beginning June 1. Grain equivalent.

Coarse Grains

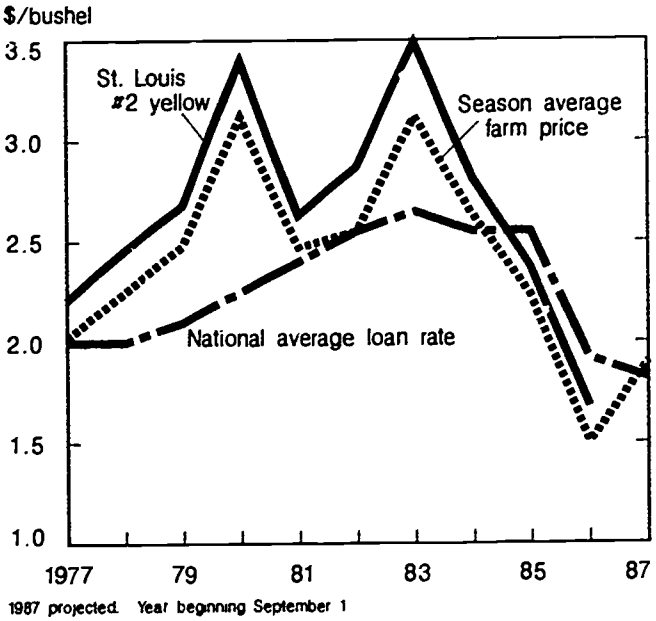
Corn supply for 1987 totaled about 12 billion bushels, down from 12.3 billion in 1986. The farm price averaged higher than in 1986, even though the loan rate was lower. Feed concentrate use was down slightly in 1987.

Chart 220
U.S. Corn Supply and Use



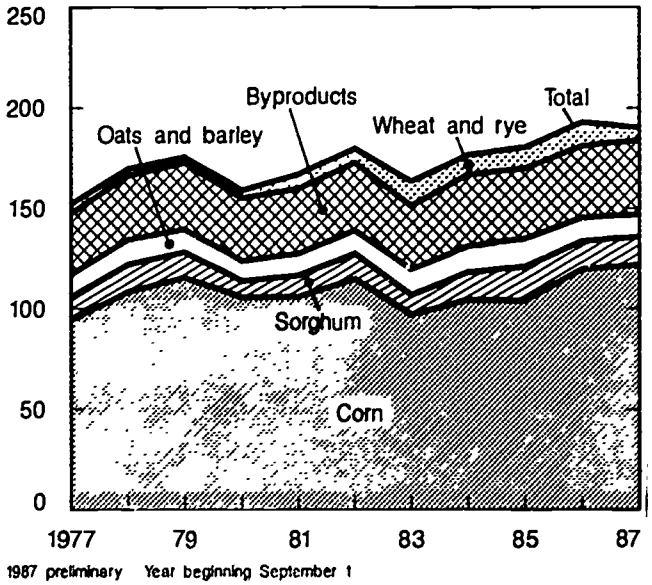
1987 estimated. Supply includes imports Year beginning September 1

Chart 221
U.S. Corn Prices



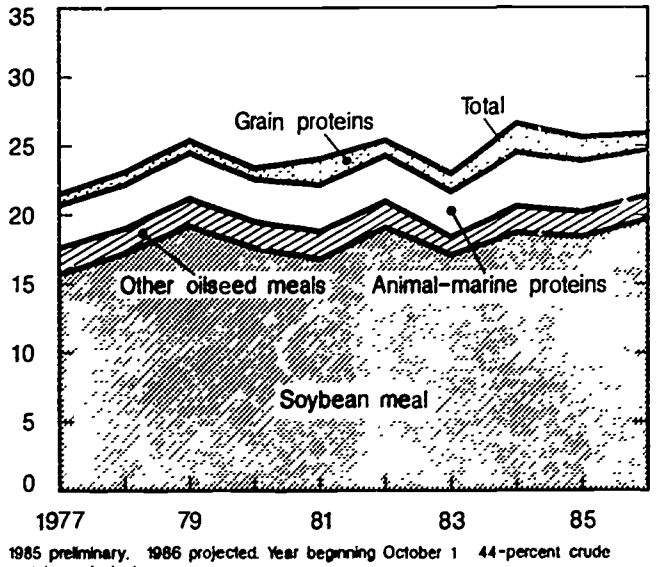
1987 projected. Year beginning September 1

Chart 222
Feed Concentrates Fed to Livestock and Poultry



1987 preliminary Year beginning September 1

Chart 223
High-Protein Feed Use



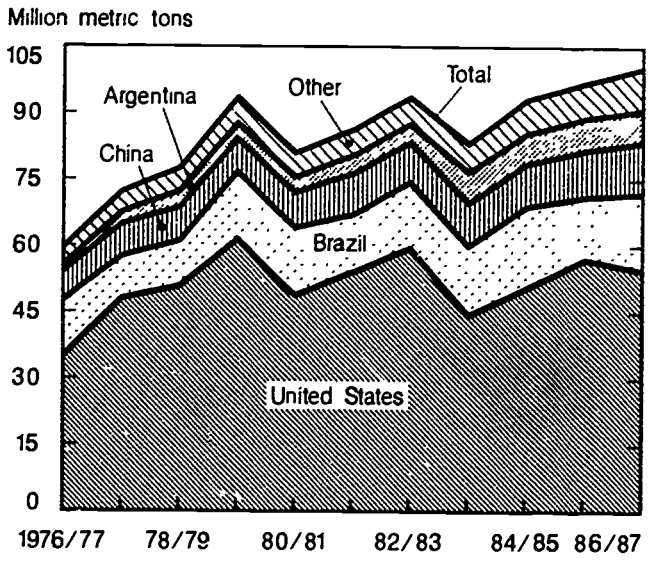
1985 preliminary. 1986 projected. Year beginning October 1 44-percent crude protein equivalent

Soybeans

World soybean production rose almost 4 percent in 1986/87 to 100.3 million metric tons. U.S. soybean production fell to 1.9 billion bushels in fiscal 1986, down 4 percent. Value of U.S. soybean and products exports was $5.6 billion in fiscal 1986, up nearly 6 percent from the previous year.

Chart 224

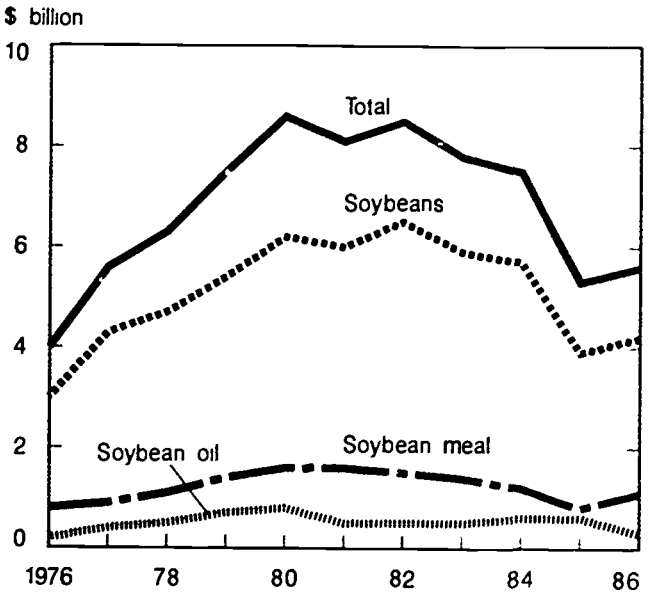
Major Soybean Producers



1986/87 preliminary Soybean production split year includes Northern Hemisphere crops harvested in the last months of the first year shown and Southern Hemisphere crops harvested early in the following year

Chart 225

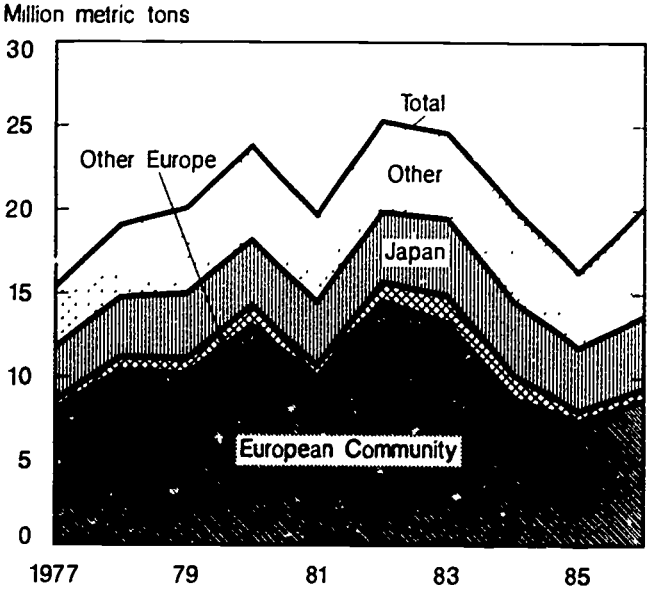
Value of U.S. Exports of Soybeans and Products



Fiscal years

Chart 226

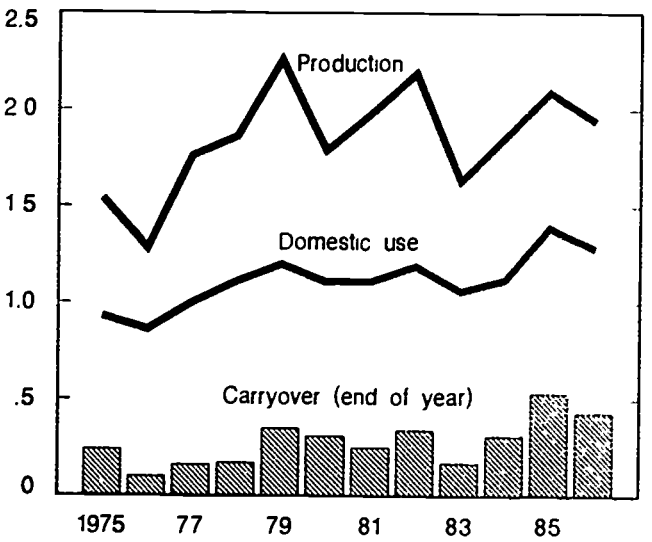
Destination of U.S. Soybean Exports



Marketing year September–August Other includes Canada and the Soviet Union

Chart 227

U.S. Soybean Production, Use, and Carryover



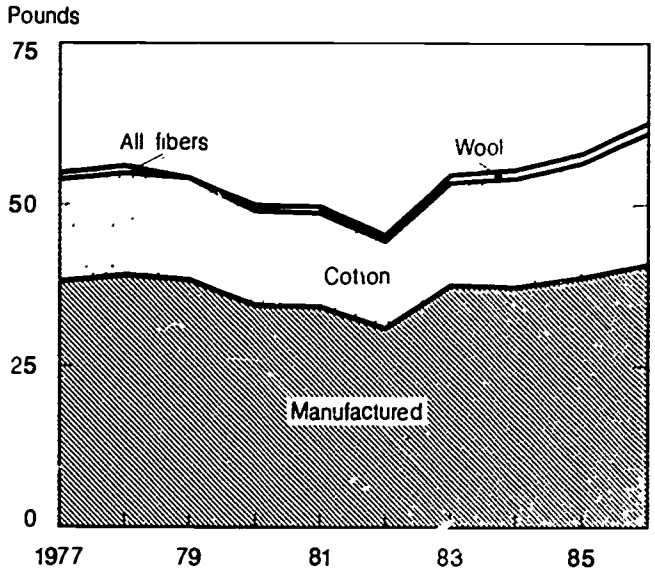
Domestic use includes crushings, seed, feed, and residual
Year beginning September 1

Fibers

World cotton production in 1986 was 69 million bales, down 13 percent from the 1985 crop. Greater consumer spending and more interest in natural fibers spurred imports. Favorable weather resulted in larger flocks and increased wool production.

Chart 228

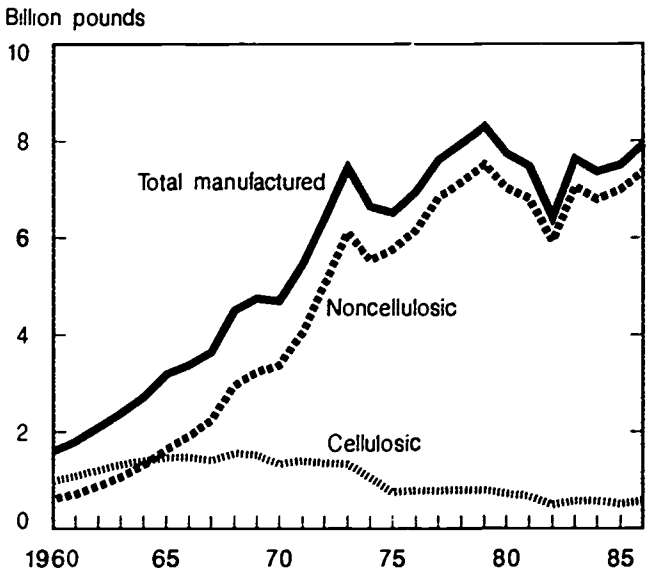
U.S. Per Capita Consumption of Fibers



1986 preliminary Mill consumption adjusted for fiber equivalent of trade balance in textile manufactures All fibers do not include flax and silk

Chart 229

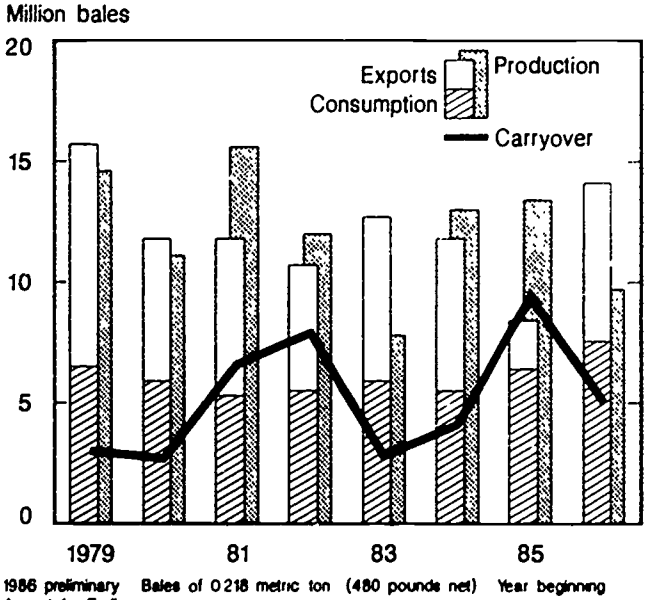
U.S. Shipments of Manufactured Fiber



Nylon polyester, acrylic olefin, glass, and spandex are noncellulosic fibers Rayon and acetate are cellulosic fibers Shipments to domestic customers

Chart 230

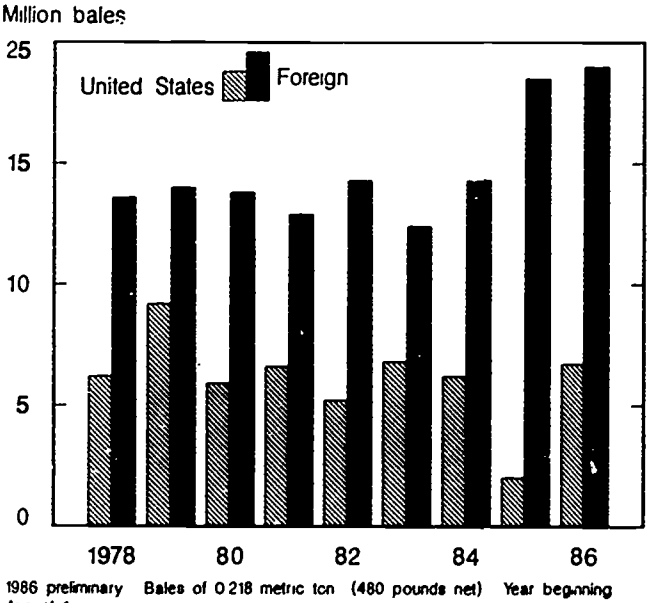
U.S. Cotton Production, Use, and Carryover



1986 preliminary Bales of 0 218 metric ton (480 pounds net) Year beginning August 1 Ending carryover

Chart 231

World Cotton Exports



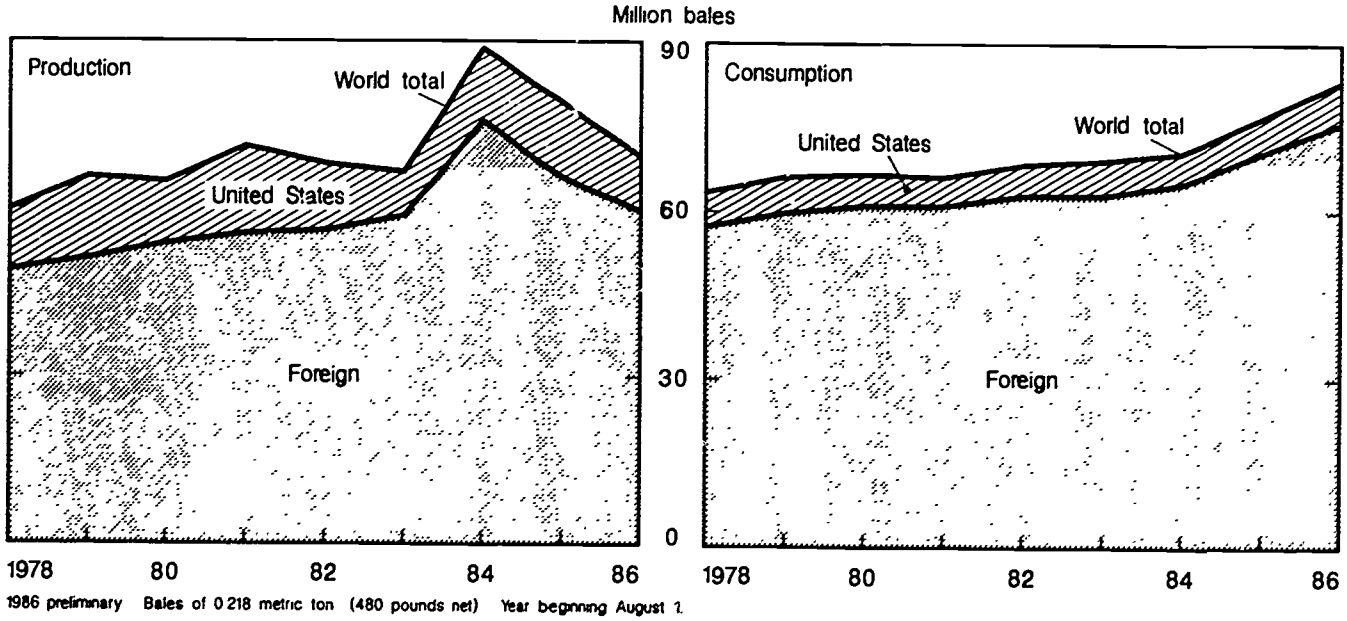
1986 preliminary Bales of 0 218 metric ton (480 pounds net) Year beginning August 1

Fibers

U.S. per capita domestic consumption of all fibers in 1986 was a record high 63 pounds. U.S. cotton use, at 14 million bales, was the largest since 1979. U.S. cotton exports rebounded, registering a 2.5-fold increase in shipments.

Chart 232

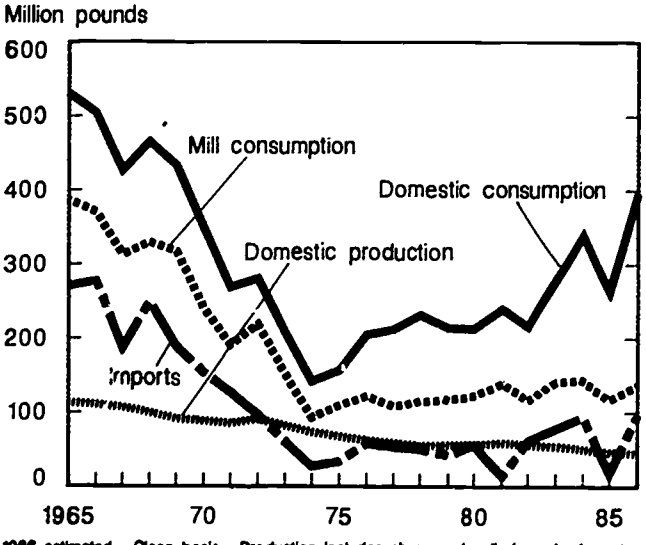
World Cotton Production and Consumption



1986 preliminary Bales of 0.218 metric ton (480 pounds net) Year beginning August 1.

Chart 233

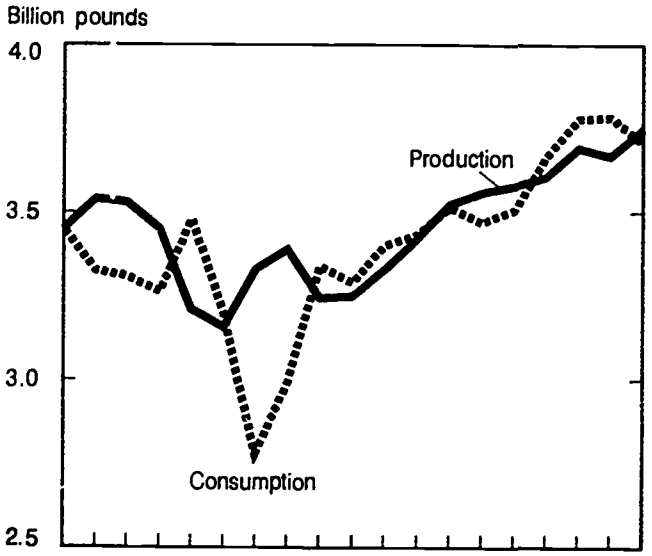
U.S. Production, Imports, and Consumption of Raw Wool



1986 estimated. Clean basis. Production includes shorn and pulled wool. Imports include duty-free and dutiable wool. Mill consumption includes apparel and carpet wool. Domestic consumption includes mill consumption plus raw wool equivalent of net textile trade balance.

Chart 234

World Production and Consumption of Raw Wool

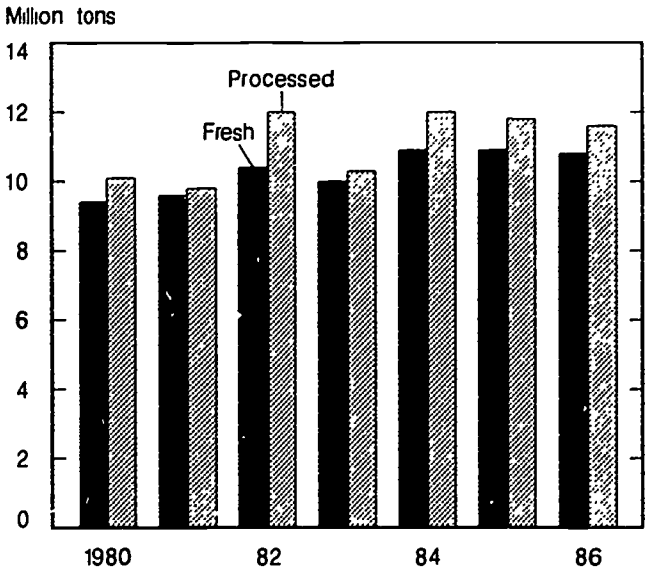


1986 preliminary Clean content weight Production data on a marketing basis

Vegetables

Total vegetable production fell nearly 1 percent in 1986. Fresh vegetable and melon exports rose 4 percent in 1986, but remained below 1984 levels. Lettuce, onions, and tomatoes are the principal fresh vegetables exported. Potato use rose to 127.7 pounds per person in 1986.

Chart 235
Fresh and Processed Vegetable Production



Fresh includes melons Excludes other commercial production in States where estimates are not made separately

Chart 236
Destination of U.S. Fresh Vegetable Exports

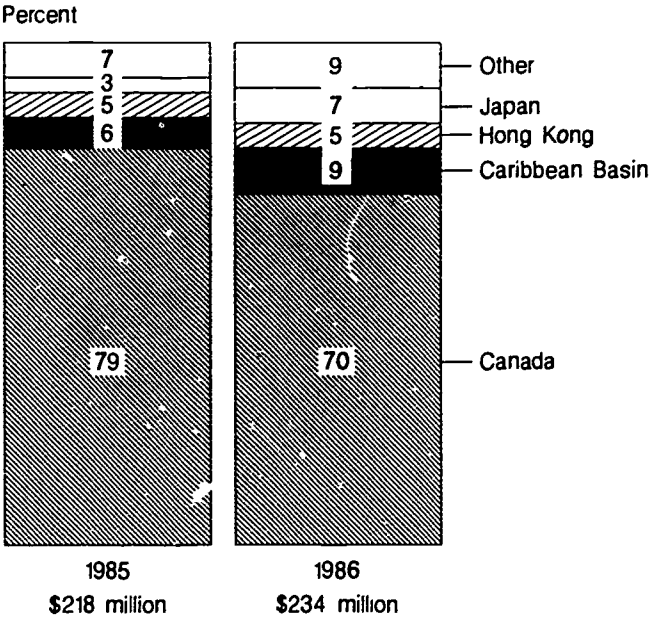
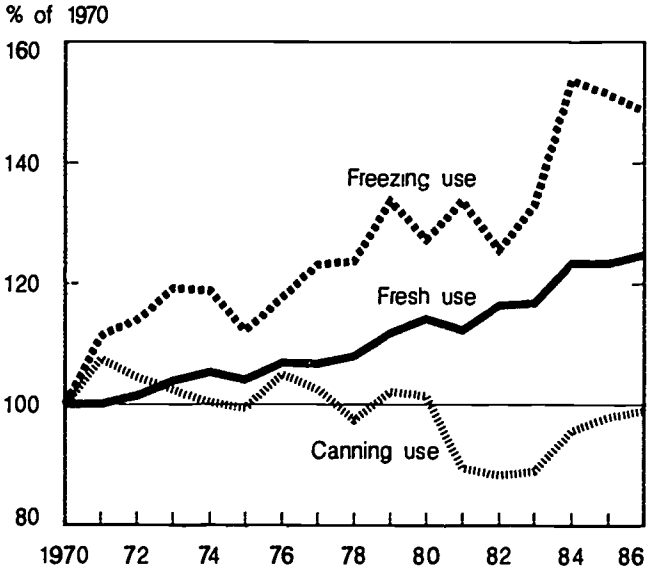
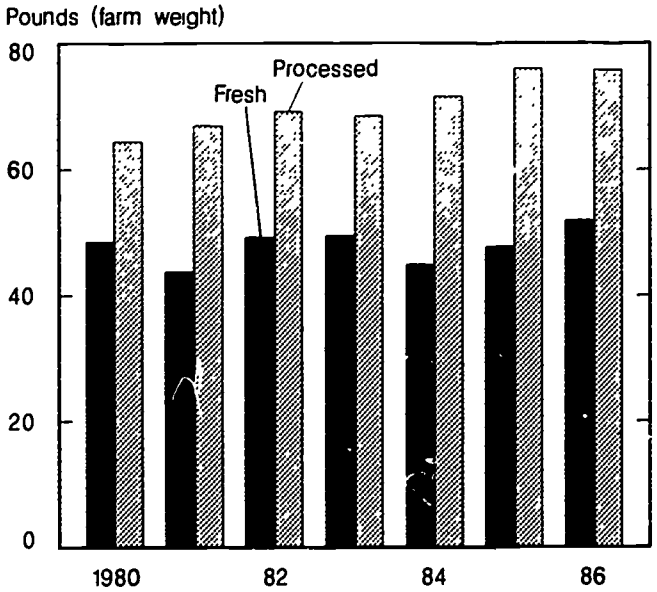


Chart 237
Per Capita Consumption of Fresh Vegetables



Freezing and canning use based on estimates of production of fresh vegetables for use in processing

Chart 238
Per Capita Utilization of Potatoes



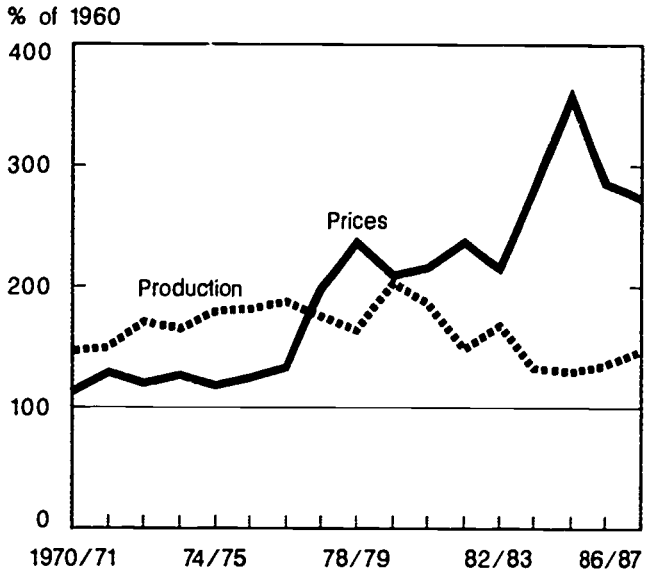
1986 preliminary Processed on farm-weight basis

Fruit

Citrus fruit production in 1986/87 totaled 12 million tons, up 8 percent from the previous year, with higher production reported for all citrus except limes. Noncitrus fruit production totaled 13.2 million tons for 1986, down 3 percent, due primarily to the reduced grape crop.

Chart 239

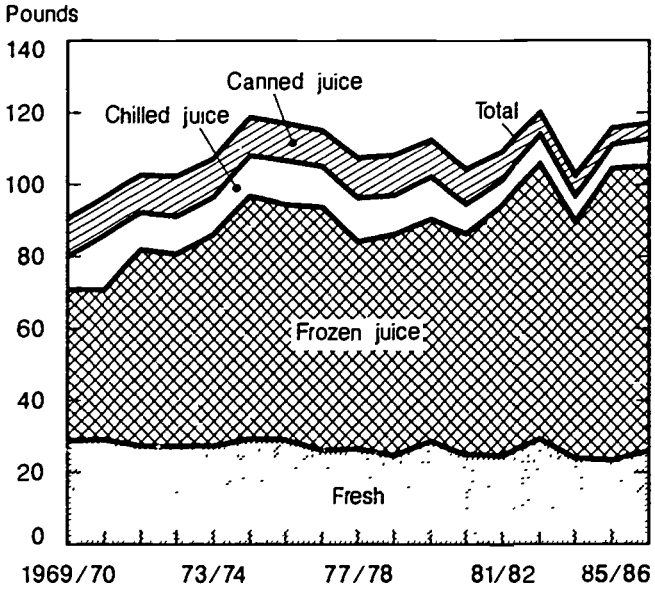
Citrus Fruit Production and Farm Prices



1986/87 preliminary Production of all citrus fruits Season average growers' prices weighted by production. Crop years

Chart 240

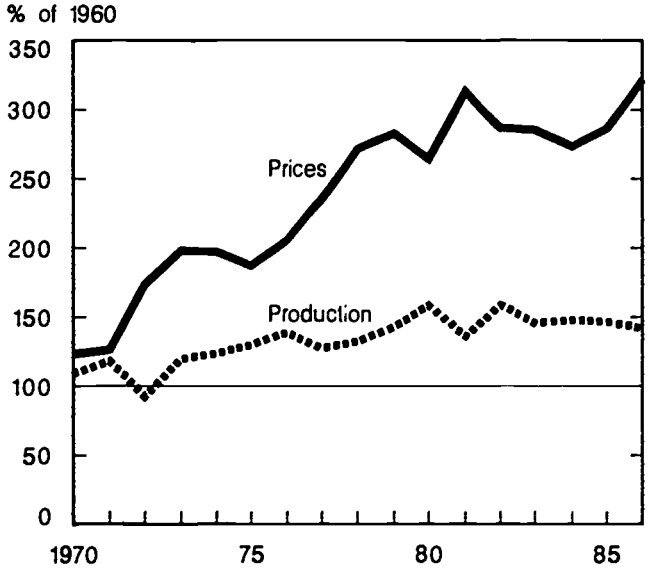
Per Capita Consumption of Citrus Fruit



1985/86 preliminary Fresh-equivalent basis

Chart 241

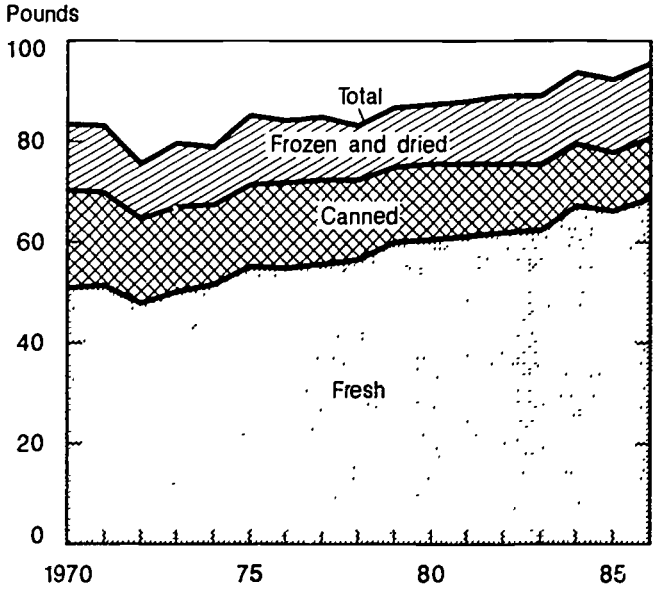
Noncitrus Fruit Production and Farm Prices



1986 preliminary. Production of 15 major fruits Season average growers' price weighted by production

Chart 242

Per Capita Consumption of Noncitrus Fruit



1986 preliminary Fresh-equivalent basis Canned includes fruit and juice

Fruit and Tropical Products

U.S. fresh fruit exports in 1986 rose nearly 15 percent, with larger sales to Japan and Europe. Consumption of coffee, the leading U.S. farm import, fell slightly in 1986. Tne 1987/88 world coffee crop was up 25 percent from the previous year World greer, coffee prices in 1987 averaged below 1986's $1.70 per pound.

Chart 243

Destination of U.S. Fresh Fruit Exports

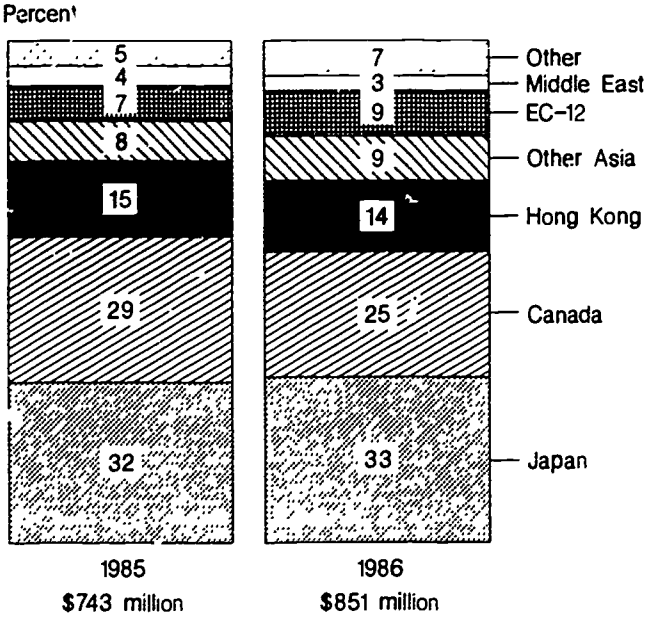
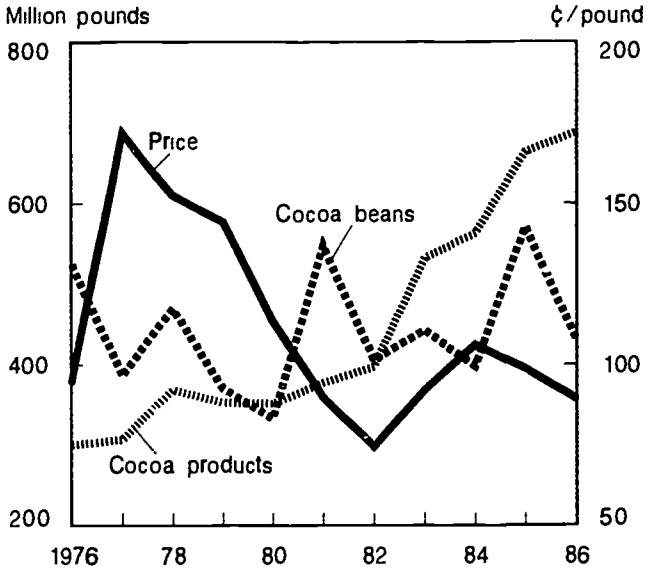


Chart 244

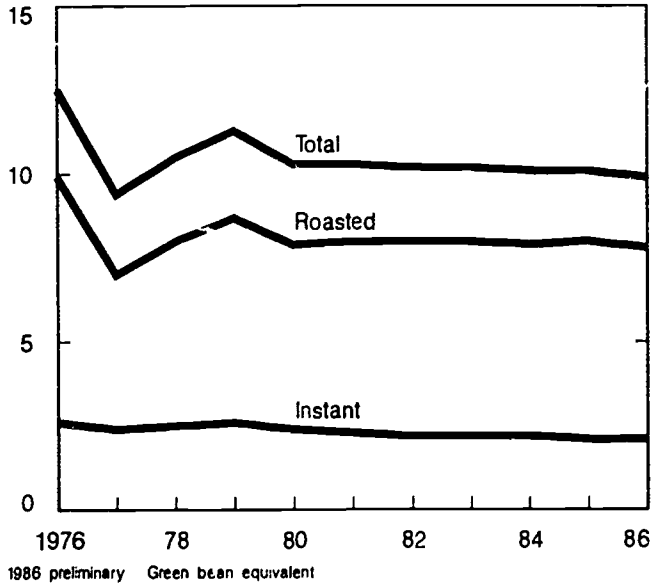
U.S. Cocoa Imports and Prices



Price for cocoa beans is the average of nearest-three active futures trading months on the Coffee, Sugar, & Cocoa Exchange Inc

Chart 245

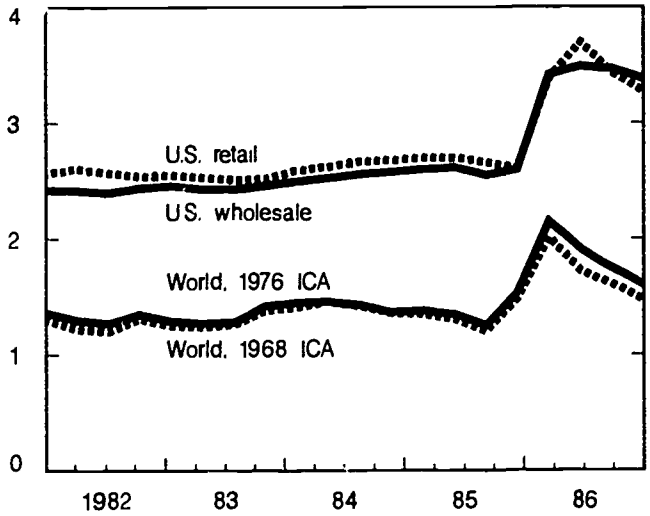
U.S. Per Capita Consumption of Coffee



1986 preliminary Green bean equivalent

Chart 246

World and U.S. Coffee Prices



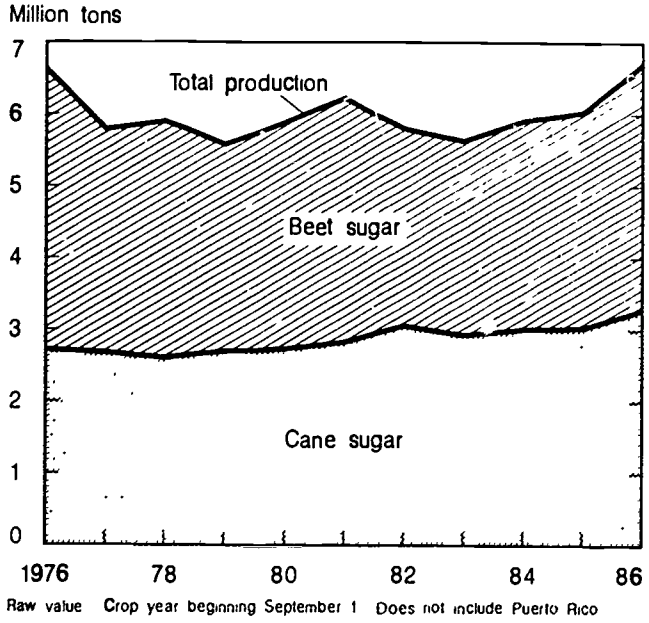
Roasted for United States and green bean for world ICA is International Coffee Agreement 1976 ICA based on composite of other mild Arabica and Robusta coffees

Sugar

Higher acreage and yields boosted beet and cane sugar production by 14 and 8 percent in 1986. Sugar imports fell to 1.92 million tons in 1986, while prices held steady. Total caloric sweetener consumption in 1986 was 15.6 million short tons

Chart 247

U.S. Beet and Cane Sugar Production



Raw value Crop year beginning September 1 Does not include Puerto Rico

Chart 248

Sources of Sugar Used in the United States

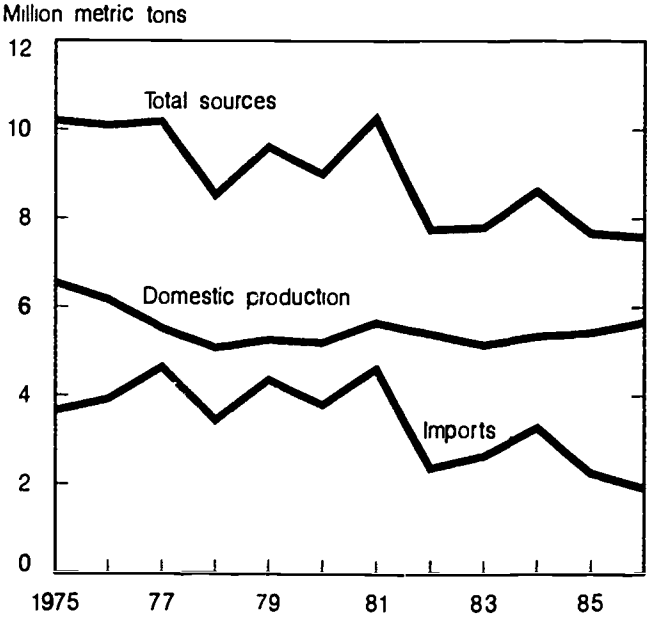


Chart 249

U.S. Sugar Prices

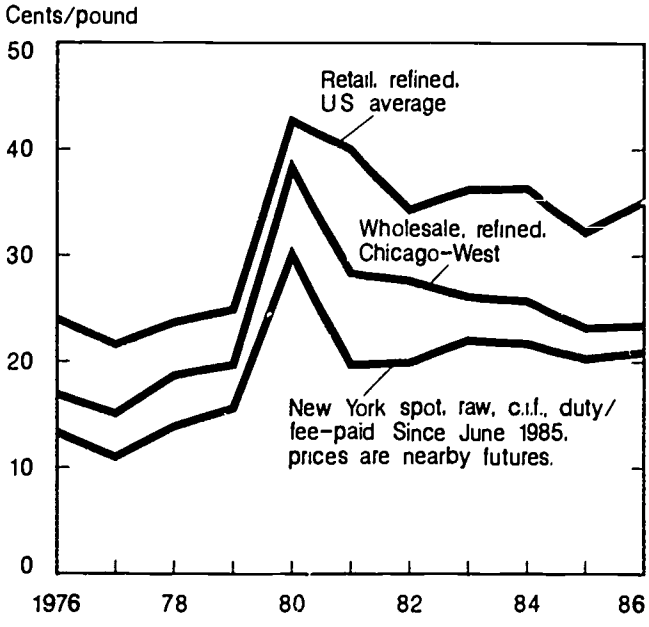
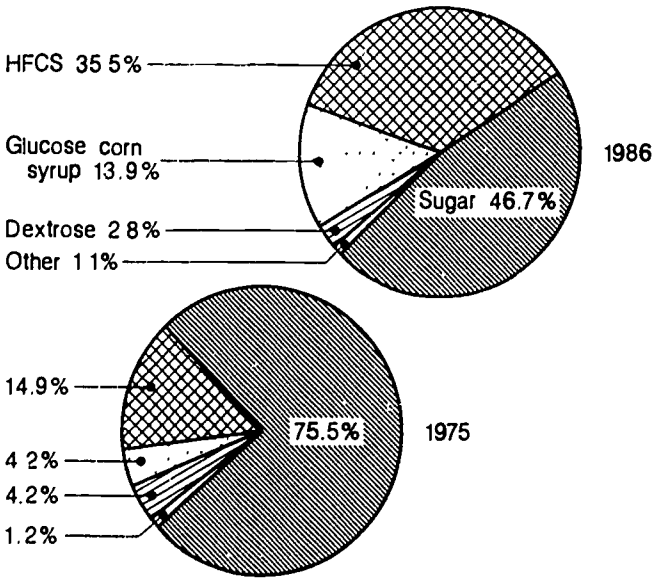


Chart 250

Per Capita Consumption of Caloric Sweeteners

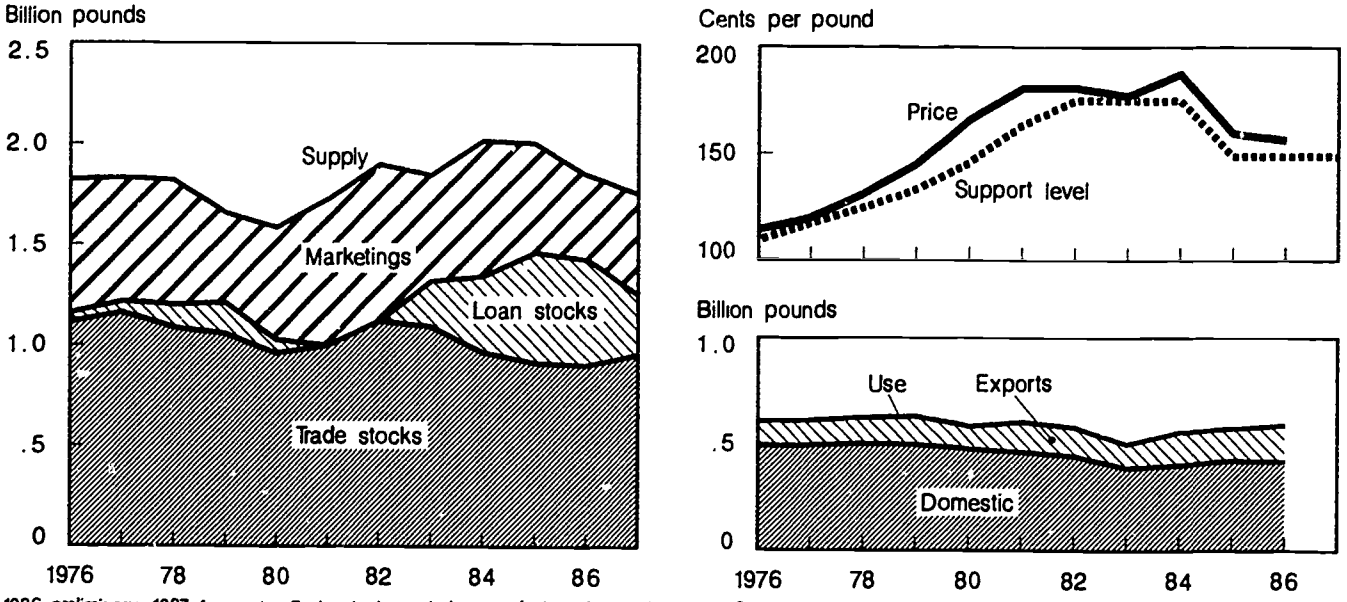


Tobacco

Total 1987 U.S. tobacco production, including burley, flue-cured, and all other kinds, was about 1.23 billion pounds, up 6 percent from the small 1986 crop. Burley support rate has held steady at $1.49 a pound the last 3 years. Flue-cured prices averaged $1.59 a pound in 1987.

Chart 251

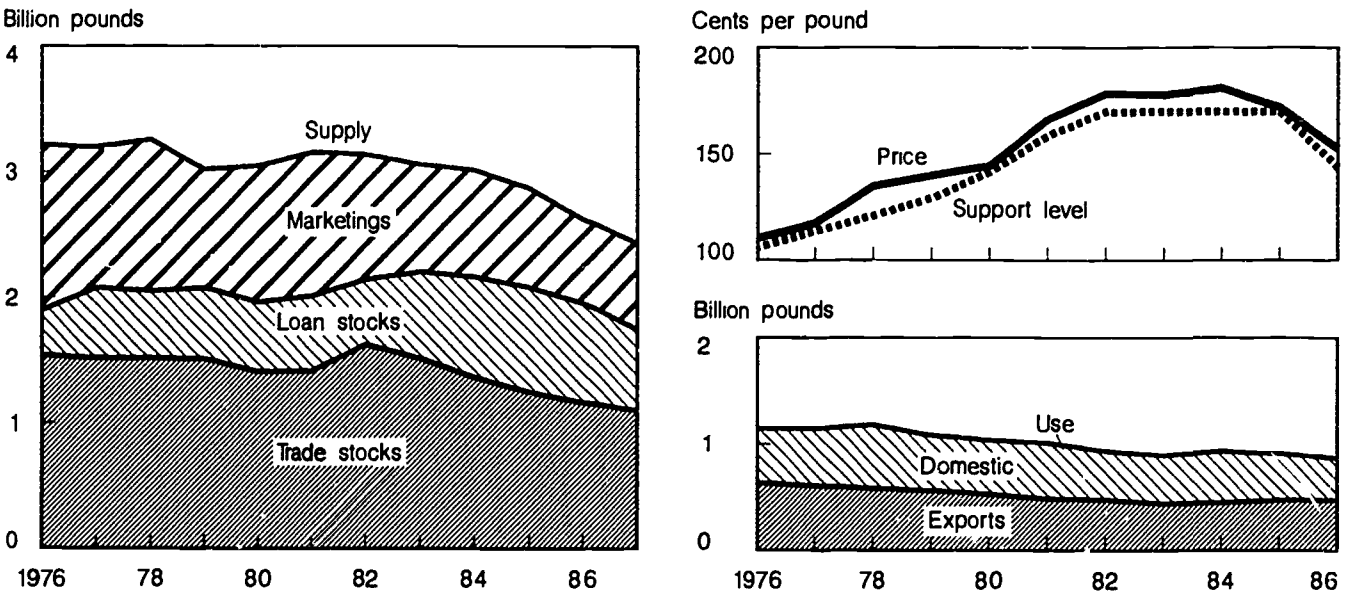
Burley Tobacco: Supply, Price, Use



1986 preliminary. 1987 forecast. Trade stocks include manufacturers' and dealers'. Crop year beginning October 1

Chart 252

Flue-Cured Tobacco: Supply, Price, Use

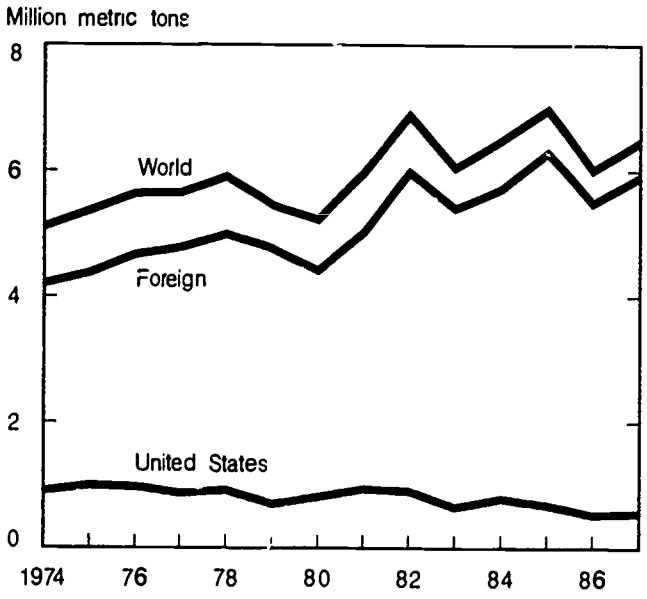


1986 preliminary. 1987 forecast. Trade stocks include manufacturers' and dealers'. Crop year beginning October 1

Tobacco

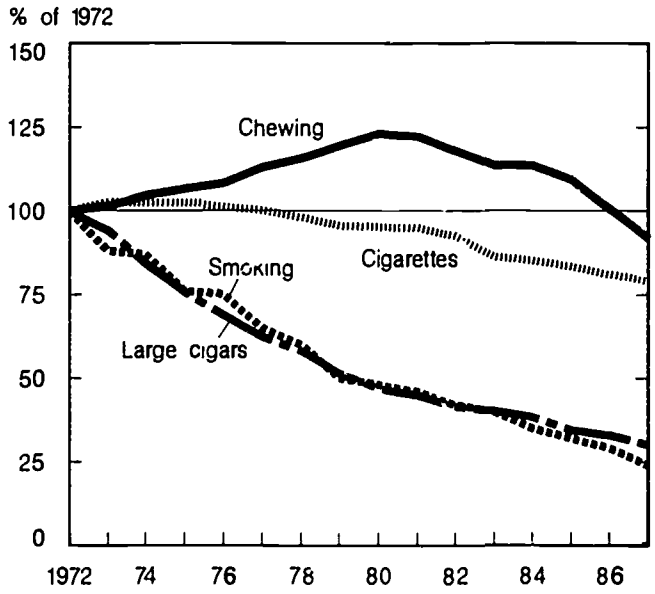
Total 1987 world tobacco production was estimated at 6.5 million tons. Domestic use was stable during the 1970's, but both cigarette production and tobacco use have fallen since 1981. Proportion of imported tobacco used in cigarettes rose from 14 percent in 1970 to 35 percent in 1984-86.

Chart 253
Unmanufactured Tobacco Production



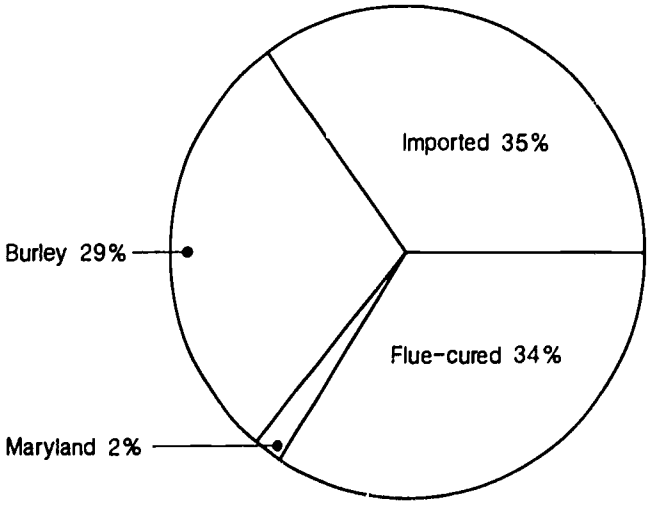
1986 revised, 1987 forecast

Chart 254
Consumption of Tobacco Products



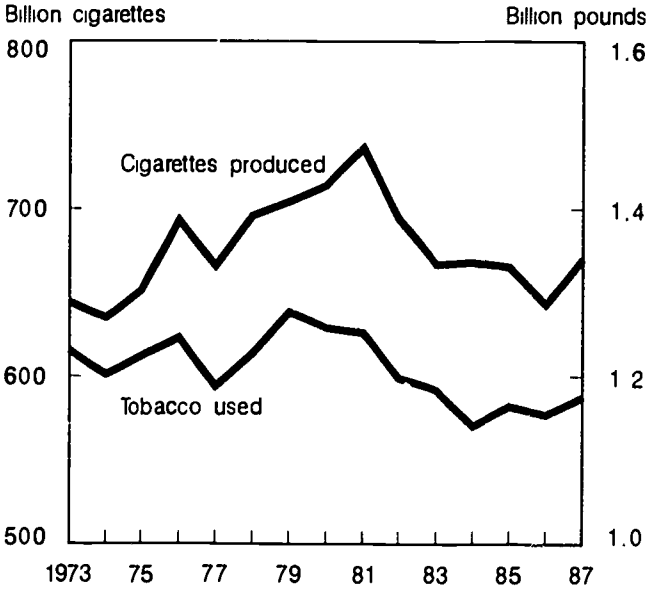
1987 preliminary

Chart 255
Tobacco Use in Cigarettes



1984-86 average

Chart 256
Cigarettes Produced and Tobacco Used



1987 forecast Billion pounds in unstemmed processing weight

Transportation

Slackening of international grain trading and a surplus of ocean vessels have held rates for heavy grain below 1980's record high level. Barge carrier rates are volatile and greatly influenced by export demand. Rail rates for farm products rose only slightly during 1986.

Chart 257

Ocean Freight Rates for Grain from U.S. Gulf

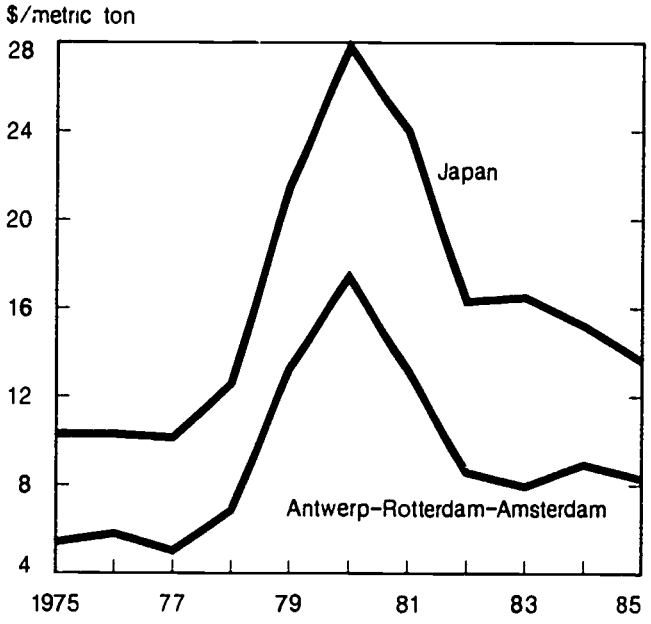
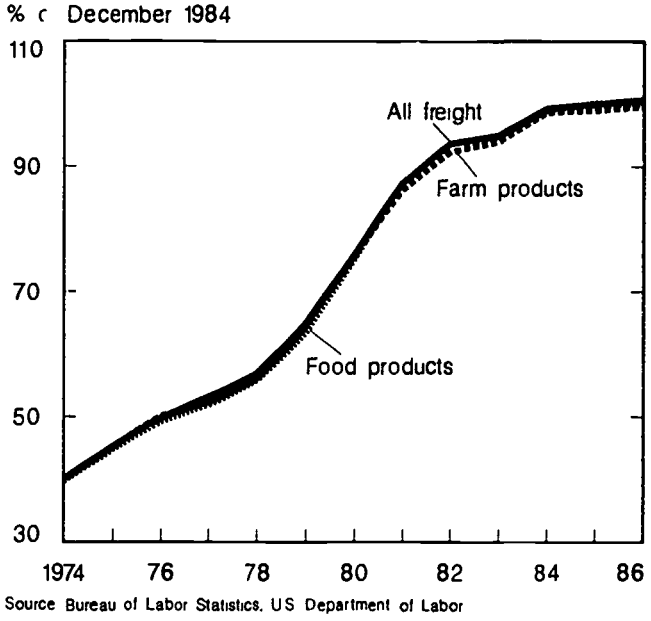


Chart 258

Rail Freight Rates for Agricultural Products



Source Bureau of Labor Statistics, US Department of Labor

Chart 259

Spot Barge Rates for Grain

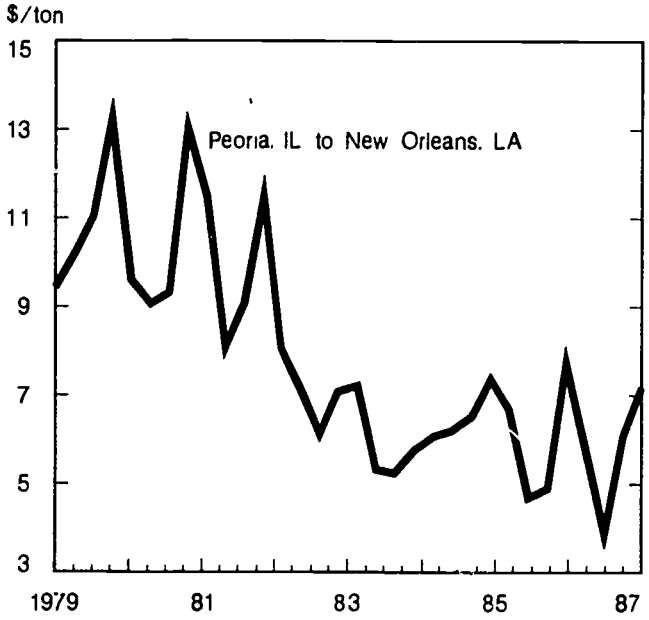
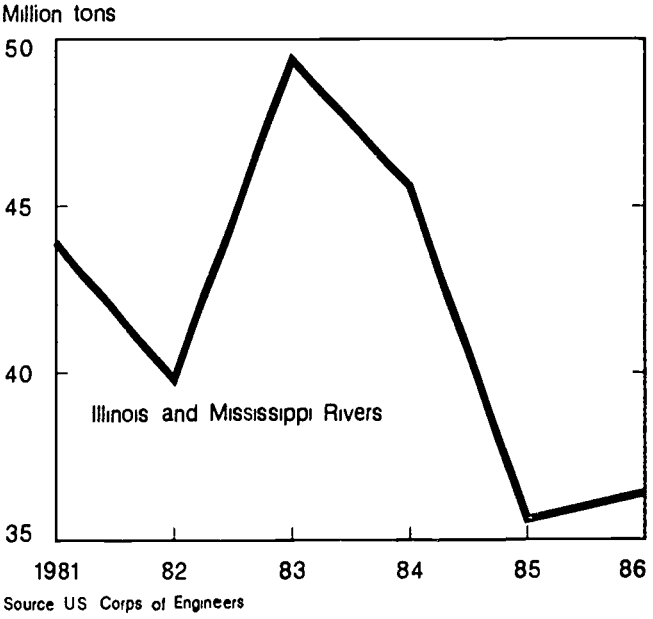


Chart 260

Barge Shipments of Grain



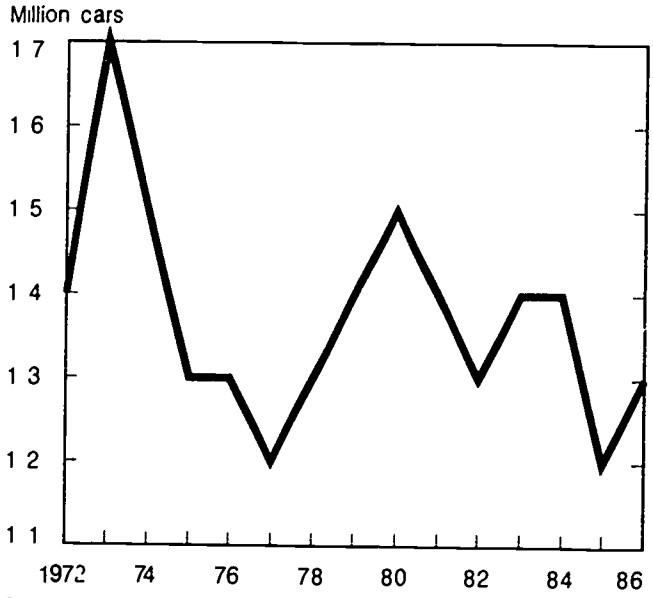
Source US Corps of Engineers

Transportation

Most fresh produce delivered by truck has a longer shelf life than if delivered by competing modes. Truck costs in the early 1980's were forced upward by rising fuel prices. The 1986 increase in rail loadings resulted chiefly from an increase in exports.

Chart 261

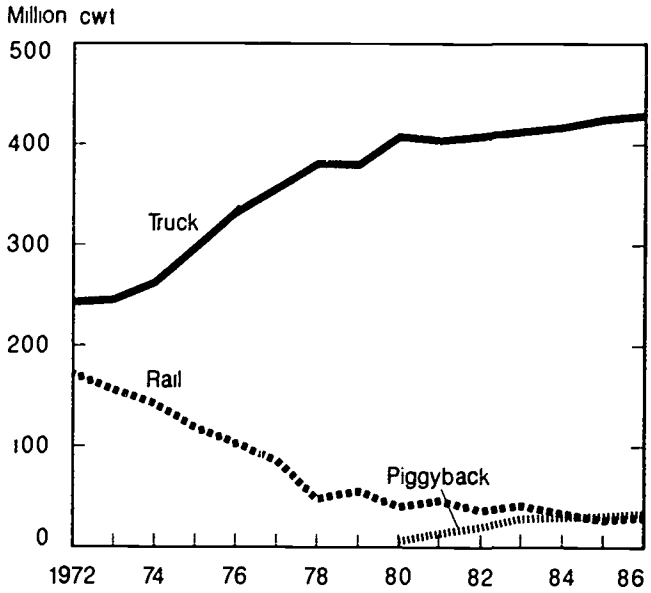
Carloads of Grain Shipped by Rail



Source Association of American Railroads

Chart 262

Fresh Fruits and Vegetables Shipped by Truck, Rail, and Piggyback



Piggyback included in rail before 1980

Chart 263

Costs of Hauling Fresh Produce by Truck

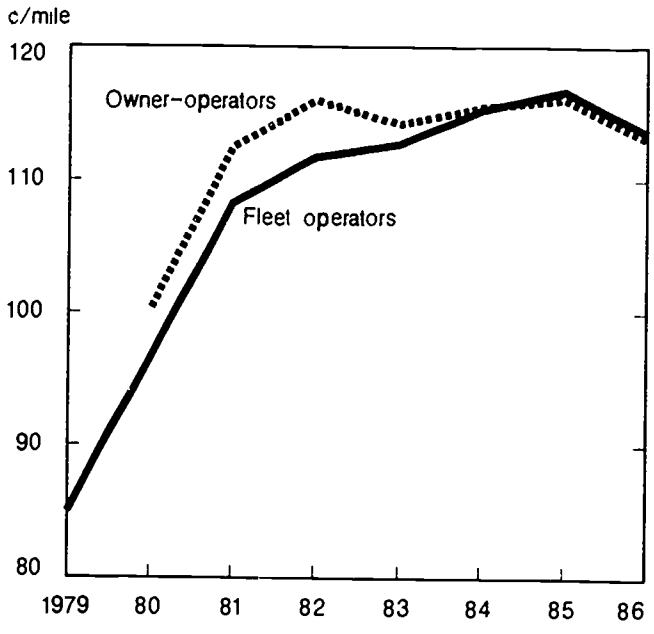
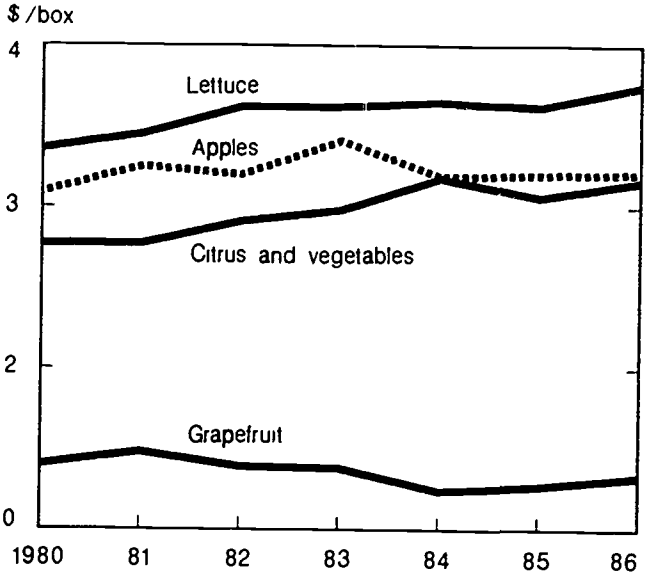


Chart 264

Truck Rates from Fresh Produce



Grapefruit rates from Florida to New York City All other produce from West Coast to New York City

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